## Howell, Beth (MRC)

From:

Matthew Roth [rothenv@cox.net]

Sent:

Wednesday, October 26, 2016 3:05 PM

To:

Howell, Beth (MRC)

Cc: Subject: Mike Gelardi

Attachments:

Elbow Road Farm Field Development, Chesapeake - JPA - Part 1 2016.10.26.Elbow Road Farm Field Development.JPA.Part 1.pdf

Beth,

Hope all is going well. I just left you a message to let you know I could not get on to the VitaLink site so I am going to send these to you as several emails due to the file size.

Let me know if you have any questions.

Thanks, Matt

Matthew Roth, P.W.S. ROTH ENVIRONMENTAL, LLC 700 Prescott Circle Newport News, VA 23602

Phone: (757) 814-1048 Fax: (757) 249-2257 Email: rothenv@cox.net

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OCT 2 6 2016

MARINE RESOURCES
COMMISSION



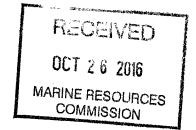
October 26, 2016

Rachael Maulorico Virginia Marine Resources Commission 2600 Washington Avenue, 3rd Floor Newport News, VA 23607

RE: Elbow Road Farm Field Development

Chesapeake, VA Joint Permit Application RE Project #06-006

USACE Project #NAO-2016-0712



Dear Ms. Maulorico:

Roth Environmental, LLC is providing you with this pdf copy of the Joint Permit Application for encroachments into farm ditches and stormwater ponds (waters of the U.S) on the subject site. The goal of the project is develop the site into a residential subdivision with associated roads, parks, and stormwater management ponds.

As a result of the proposed development, the following impacts will occur:

- 2,620 linear feet of unvegetated forested farm ditches through uplands
- 900 linear feet of sparsely vegetated farm ditches through uplands
- 3,155 linear feet of unvegetated farmed ditches through uplands
- 0.16-acres of stormwater management ponds that were excavated from uplands

None of the proposed work will affect tidal wetlands. Due to the condition of the ditches and their limited ability to perform ecological functions, the environmental benefits of taking the farmed fields out of production and installing stormwater management ponds offsets this impact.

Audrey Cotnoir is our project manager at the Corps of Engineers and Sheri Kattan is our project manager at DEQ.

Please contact me should you have any questions with the submitted information.

Sincerely,

ROTH ENVIRONMENTAL, LLC

Matthew Roth, P.W.S.

President

c: Tri-Cities Properties, LLC

Macintosh HD:Users:Roth:Documents:Roth Environmental, LLC:Projects:2006:06-006.centerville:2016 Farm Field JPA:2016.10.26.Maulorico.Elbow Road Farm Field Development.cover letter.docx



## ELBOW ROAD FARM FIELD PROJECT PROJECT DESCRIPTION AND DISCUSSION CHESAPEAKE, VIRGINIA RE PROJECT #06-006 OCTOBER 26, 2016

The Elbow Road Farm Field Project is located at 2014 Elbow Road in Chesapeake, Virginia. This is approximately one mile east of the intersection of Centerville Parkway and Elbow Road. The proposed project area is comprised predominantly of farmed fields with a few inclusions of forested areas.

The primary purpose of the proposed project is to construct a residential subdivision. The proposed plans for the subdivision depict 152 lots with associated roads, stormwater management features, and green space.

This project is being developed as a single and complete project as it is not dependent on other parts of development in the City of Chesapeake to be constructed. Utilities are being extended from Elbow Road. The proposed development will include two connections to Elbow Road and several side streets. The two connection points to Elbow Road are required by city code to allow for access in case one entrance is blocked.

The wetlands onsite are found along the northern perimeter of the proposed project. These areas are nontidal forested wetland areas (PFO). As shown on the design plans, the proposed house lots do not encroach into the wetlands. There are no proposed impacts to these wetland areas as part of this development.

From a hydrological standpoint, the wetlands flow to the south through a series of farm ditches. These ditches interconnect through farmed fields and flow to one outfall point through a culvert under Elbow Road. Approximately 15 years ago, the two stormwater management ponds that are located on the site were excavated from uplands. The ponds were designed and located so that the existing farm ditches would flow into them. One pond is located on the northwestern corner of the site and the other on the southeastern corner of the site. The purpose of the ponds was to aid in the removal of sediment from the stormwater within the site and stormwater that leaves the site. We have shown these ponds on the wetland delineation maps.

The jurisdictional farm ditches on the site interconnect the wetlands to the north of the project area to other jurisdictional features (wetlands and streams) to the south of Elbow Road. The jurisdictional ditches are shown on the wetland delineation drawing and the permit drawings and have been confirmed by the Corps of Engineers.

The impacts to jurisdictional areas on the site include:

- 2,620 linear feet of unvegetated forested ditches through uplands.
- 3,155 linear feet of unvegetated ditches through farmed fields (uplands).
- 900 linear feet of ditches that contain emergent vegetation.
- 0.16 acres of impacts to the stormwater management ponds excavated from upland areas.

Although these ditches will be impacted, the connection between the wetlands to the north of the project site and the jurisdictional features south of Elbow Road will be maintained. This will be through a series of ditches, culvert pipes, and stormwater management ponds. The flow through the outfall at Elbow Road will be maintained and there will not be a reduction in hydrology to the downstream resources.

### Mitigation

The existing ditches within the project area have a limited ecological value to the area. The majority of the ditches are unvegetated or sparsely vegetated features. They are "straight line" conveyances of stormwater through the site. As the ditches allow stormwater to concentrate and flow through the site with little interaction with plants, there is minimal potential removal of nutrients or pesticides from the farm fields. Being that they do not have variability in depth or sinuosity, there is also minimal potential for them to reduce sediment loads that leave the property through the stormwater.

The ditches onsite continually flush during rain events. The ditches in the fields are predominantly unvegetated features are routinely maintained as part of the field plowing.

The proposed development will maintain the connection between upstream wetlands and downstream resources. As part of the development plans, portions of the ditches will be piped while others are relocated. The important feature of the drainage system will be the continuous connection of the wetlands on-site to the downstream aquatic features.

The two existing stormwater ponds located on the project site were both excavated from uplands. As they treat stormwater that flows through the jurisdictional ditches, and therefore have been claimed as jurisdictional features as part of the wetland delineation. The functions of these ponds will be replaced by three larger stormwater management ponds. The new ponds will be engineered to significantly reduce the pollutants that originate from the property. This will be accomplished by interacting the stormwater with wetland plants and holding the stormwater for extended periods of time so that the vegetation has the opportunity to absorb nitrogen and phosphorus.

The proposed stormwater management ponds will also remove far more sediment than the existing ponds and ditches. This will be accomplished using forebays as the stormwater enters the ponds and holding the stormwater for extended periods of time to allow the suspended solids to settle out. The extended detention will allow the stormwater ponds to discharge the

stormwater as pre-development rates. The stormwater that discharges the site post development will be far cleaner than the stormwater that discharges from it currently.

An additional benefit to the environment is the removal of 33.5-acres of farm fields from operation. This will reduce fertilizers, pesticides, and herbicides that are currently used on the fields. These pollutants currently are applied at least twice a year with the rotation of the crops. With each rainfall event, they are washed downstream into the ditches. As the ditches allow direct flow through the site, the pollutants are discharged directly to the downstream aquatic resources. By eliminating the agricultural application of these fertilizers and chemicals, the offsite stormwater discharge will be improved.

As the existing farm ditches and stormwater ponds provide very limited functions to the environment, the benefits of the proposed project adequately mitigates the impacts. With this improved overall function and the maintained connection of onsite wetlands to downstream resources, no mitigation is proposed to replace the impacts to the ditches and stormwater ponds.

PLEASE PRINT OR TYPE ALL ANSWERS. If a question does not apply to your project, please print N/A (not applicable) in the space provided. If additional space is needed, attach extra 8 ½ x 11 inch sheets of paper.

CHECK ONE, if applicable:	Pre-Construction Notificati (For Nationwide Permits ONL		SPGP	
PROJECT LOCATION INFO	RMATION			
boundary, so that it may be loca	i, such as a USGS topographi ited for inspection. Include a	c map or street marrow indicating	nap showing the site location and project the north direction.)	
Street Address		City/County/Zipc		
Subdivision		CHESAPEARL Lot/Block/Parcel		
NIA			0382 + A PARTION OF 039 00000	
Name of water body(ies) within pro	oject boundaries and drainage a	rea (acres or squa	re miles)	550 380
UNNAMED DITCHES			7.50	
Tributary(ies) to: ALBEMALLE Basin: ALBEMALLE CANAL (Example: Basin: James River	Subbasin: Middle James River	NOW RIER		
Special Standards (based on DEC	Water Quality Standards 9VAC	225-260 et seq.): _	NA	_
Project type (check one)		vate, non-commer nmunity, commerc	cial, residential) al, industrial, government)	
Latitude and longitude at center of	project site: <u>36 - 44 - 4</u>	12/76-10	-00	
USGS topographic map name:	Fenneess, VA			
8- digit USGS Hydrologic Unit Cool If known, indicate the 10-digit and D30\02.05	le (HUC) for your project site (S 12-digit USGS HUCs (see <u>http:</u>	ee <u>http://cfpub.epa</u> //dswcapps.dcr.viro	.gov/surf/locate/index.cfm ): ginia.gov/htdocs/maps/HUExplorer.htm :	
Name of your project (Example: W	/ater Creek driveway crossing) j	5. Bow ROAD	FARMFIELD DEVELOPMENT	-
			publicprivateimproved unimprove	d.
			ible landmarks or major intersections:  TJawake, Process one	
MILE GAST ON ELPON				
		-		
Does your project site cross bound if so, name those localities:	laries of two or more localities (	.e. cities/counties/	towns)? Yes No	
	EOR ACENO	Y USE ONLY		
	POR AGENC	Notes:		
			RECEIVED	
JPA# 16-1737				
. , _		]	OCT 2 6 2016	
REVISED: March 2014		7	MARINE RESOURCES COMMISSION	

2. APPLICANT, AGENT, PROPERTY OWNER, AND CONTRACTOR INFORMATION								
The applicant(s) is/are the legal entity to which the permit may be issued. The applicant(s) can either be the property owner(s) or the person/people/company(ies) that intend(s) to undertake the activity. The agent is the person or company that is representing the applicant(s). If a company, please use the company name that is registered with the State Corporation Commission (SCC), or indicate no registration with the SCC.								
Applicant(s) (For a company, use SCC-registered name)			d name)	Agent (if applicable) (For a company, use SCC-registered				
TRI-City PROPERTIE				Laborate Ann	H EMIRONA			
Mailing address		Mailing address	SS ENVIRENMENT	716.	ULAL,	LLC		
3333-24 VIRGINIA	BE		NO.		ESCOTT CIR	cl	E	
City		State	Zip Code	City	,		State	Zip Code
VIRGINIA BEACH		VA	23452	NawPort	NEWS		VA	23602
Phone number w/area code	Fax			Phone numbe			эх	
(157) 340.9001				(151) 814	4-1048	_		49-2257
Mobile/pager	E-ma	· · · · · · · · · · · · · · · · · · ·		Mobile/pager			-mail	
	mt	gelard	ieesqco.c	om				ve cox.net
State Corporation Commission I	D num	ber (if app	olicable) O	1	tion Commission I	Dη	umber (if	applicable)
S031890-9				56-2	597927			
Certain permits or permit authori electronic mail, please provide a	ization: n e-ma	s may be iil addres:	provided via elec	tronic mail. If the	e applicant wishes	s to	receive th	eir permit via
cicondino man, picase provide a	11 6-1116	m aquica.	3 11010.					
Property owner(s), if different fro	ന മേര	icant (Fo	r a company		mown (For a comp			C registered
000	AME	-	a company,	name)		pai (	y, use oc	O-registered
رح Mailing address	HANE			Mailing address	KNOWN			
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City		State	Zip code	City			Cinta	I: 70-1
Oily		State	Sib code	City			State	Zip code
Phone number w/area code	Fax	<u> </u>	:	Ohono numbo	r warna nada	E.	***************************************	
Thore fulliber water code	rax.			Phone number	r w/area code	ra	3X	
Mobile/pager	E-ma	ił		Mobile	<del>uutonna maanaan ka </del>	_		
Woonerpage	C-1118	It		Mobile/pager		E.	mail	
State Corporation Commission I	<u> </u>	ar lif an	-liushfai	State O	u	_		
State Corporation Commission	o num	ber (ii app	Jiicable)	State Corporat	tion Commission I	Un	umber (it i	applicable)
	<del></del>			<u> </u>				
3. PROVIDE A DESCRIPTION	I DE T	HE DRA	IECT PROJECT	DDIMADY AND	SECONDADY D	1110	DOSES I	DOMEST NEED
INTENDED USE, AND ALT	ERNA	TIVES CO	ONSIDERED (Att.	ach additional sl	neets if necessary	}		
<ul> <li>The purpose must include a</li> </ul>	ny nev	develop	ment or expansio	n of an existing l	land use and/or pr	ope	sed future	e use of residual
land  * Describe the physical altera	tion of	curface w	intere					
<ul> <li>Include a description of alter</li> </ul>	native:	sunace w s conside	raters red to avoid or mi	nimize impacts t	to surface waters	inc	iudina wet	llands to the
maximum extent practicable	. inclu	de factor	s such as, but not	limited to: altern	native construction	i tec	chnologies	s, alternative
project layout and design, a								
<ul> <li>For utility crossings, include</li> <li>For major surface water with</li> </ul>	ndrawa	iternative Is. public	surface water sur	ative construction	on methodologies or projects that v	CON will a	sidered alter in str	eam flows include
the water supply issues that	form t	ne basis (	of the proposed p	roject.	p	1100 5		commons, moduc
		· · · · · · · · · · · · · · · · · · ·		111				
SEE PLOTECT DESC	RIPFI	DA)						
								:
								1

3. PROVII	DE A DESCRIPT	ION OF THE PROJE	ECT (Continued)			
	osed commence	ment of work (MM/D		Date of proposed completion of work (MM/DD/YYYY)		
Are you sub local, or Fed	mitting this applic leral agency?	cation at the direction YesNo	of any State, Has a which		ed or has any portion of the pro permit been completed?	ect for
performed ti	ne work, and whi	ch agency (if any) dir		application. In ac	pleted and/or when it commence Idition, you will need to clearly	ed, Who
Are you awa (If yes, pleas		olved violations of env	vironmental law or litigat	ion involving the p	roperty? Yes 🖊 No	
4. PREVIO	US SITE VISITS	AND/OR PERMITS I	RELATED TO THE PRO	OPOSED WORK	Include all Federal, State, and L	ocal
pre-applicat	ion coordination	or previous permits)				
Agency	Activity.		Permit/Project number, and explanation of non- reporting Nationwide permits previously used	Action taken ** and Date of Action	If denied, give reason for denia	
USACE	APPRINED ?	Tρ	MAO-2016-0712	APPRINED		
			VWP INDIVIDUAL			
VDES	WERLAND	PERMIT	PERMIT # 00-1688	PERMITTED		
"" Issued, de	enied, site visit					,i
5. PROJEC	T COSTS					
Approximate	e cost of the entir	re project, includion n	naterials and labor \$ 1	5.000 00D		
Approximate cost of the entire project, including materials and labor: \$\frac{15,000,000}{2}  Approximate cost of only the portion of the project affecting State waters (below mean low water in tidal areas and below ordinary						
high water r	nark in nontidal a	reas): \$ 150,0	20 State waters	pelow mean low (	Water in fludi dieds dhu delow of	umary
L						

6. PUBLIC NOTIFICATION (	Attach additional sheets if necessary)				
<ul> <li>Complete information for all property owners adjacent to the project site and across the waterway, if the waterway is less than 500 feet in width. If your project is located within a cove, you will need to provide names and mailing addresses for all property owners within the cove.</li> </ul>					
	provide the requested information for				
Property owner's name	Mailing address	City	State Zip code		
Address and phone number (inc	neral circulation in the area of the projection of the projection of Aware , Northur Aware , Northur ,				
Have adjacent property owners	been notified with forms in Appendix A	A?Yes No (attach copie	es of distributed forms)		
7 TUDEATENED AND ENDA	NGERED SPECIES INFORMATION				
7. THREATENED AND ENDA	NGERED SPECIES INFORMATION				
Please provide any information concerning the potential for your project to impact state and/or federally threatened and endangered species (listed or proposed). Attach correspondence from agencies and/or reference materials that address potential impacts, such as database search results or your Corps' waters and wetlands delineation confirmation. Contact information for the Virginia Department of Game and Inland Fisheries and the Virginia Department of Conservation and Recreation, Division of Natural Heritage can be found on page 4 of this package.					
8. HISTORIC RESOURCES INFORMATION					
Note: Historic properties include but are not limited to ercheological sites, battlefields, Civil War earthworks, graveyards, buildings, bridges, canals, etc. Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant.					
Are any historic properties located within or adjacent to the project site? Yes No Uncertain If Yes, please provide a map showing the location of the historic property within or adjacent to the project site.					
Are there any buildings or structures 50 years old or older located on the project site? Yes No Uncertain If Yes, please provide a map showing the location of these buildings or structures on the project site.					
Is your project located within a I	nistoric district? Yes No strict:	Uncertain			

IMPACT AREAS 1-2

			1. CV 2	' 5	
8. HISTORIC RESOURCES INFORMATION (Continued)					
Has a survey to locate archeological sites and/or historic structures be Yes No Uncertain	een carried	out on the property	?		
If Yes, please provide the following information: Date of Survey:	JOUST Z	<del>2</del> 006			
Name of firm: CCR, INC.					
Is there a report on file with the Virginia Department of Historic Resou				0	
Title of Cultural Resources Management (CRM) report: Ae.	CHARDLOG	CAL + ARCHITE	TURAL S	Suevey. PR	ofbset
Title of Cultural Resources Management (CRM) report: A&	Uncertain	Satherster	J PARKLIN	m + Greense	21

## 9. WETLANDS, WATERS, AND DUNES/BEACHES IMPACT INFORMATION

Report each impact site in a separate column. If needed, attach additional sheets using a similar table format. Please ensure that the associated project drawings clearly depict the location and footprint of each numbered impact site. For dredging, mining, and excavating projects, use Section 18.

dredging, mining, and excavating proj			
	Impact site number 1	Impact site number 2	Impact site number 3
Impact description (use all that apply): F=fill EX=excavation S=Structure T=tidal NT=non-tidal TE=temporary PE=permanent	F, NT, PE, NV	NT, PE, √	NT, PE, NV
PR=perennial IN=intermittent SB=subaqueous bottom DB=dune/beach IS=hydrologically isolated V=vegetated NV=non-vegetated MC=Mechanized Cleaning of PFO (Example: F, NT, PE, V)	Nonvenerated Firested Farm Ditches Through Uplands 2620 Lf.	SPARSELY VENETATES FARM DITCHES THROUGH UPLANDS 900 LF.	Nonkestated Farufied Disches throw Urlands 3155 'Lf.
Wetland/waters impact area (square feet)	7860年	2700中	1887中
Dune/beach impact area (square feet)	O	0	D
Stream dimensions at impact site (length and average width in linear feet, and area in square feet)	NA	NA	NA
Volume of fill below Mean High Water or Ordinary High Water (cubic yards)	14504	5004	145 e4
Cowardin classification of impacted wetland/water or geomorphological classification of stream Example wetland: PFO; Example stream: wide; bank eroding; braided channel; Example stream: 'C' channel	PFO	PEM	RYUB
Average stream flow at site (flow rate under normal rainfall conditions in cubic feet per second)	42cFs	<2 <i>e</i> fs	42cfs
Contributing drainage area (acres or square miles)	130AC	130AC	130Ac

9. WETLANDS/WATERS IMPACT_INF(	ORMATION (Continued)			
DEQ classification of impacted resource(s): Estuarine Class II Non-tidal waters Class III	1	2	. 3	
Mountainous zone waters Class IV Stockable trout waters Class V	IL	II	II	
Natural trout waters Class VI Wetlands Class VII				
For DEQ permitting purposes, also sul the Footnotes section in the form instr	mit as part of this section uctions.	a wetland and waters boundary	delineation map <sup>(4)</sup> – see	
For DEQ permitting purposes, also sut streams that are located within the pro conservation easement, restrictive cov	posed project or compans	ation areas that are also under:	nds, open water, or a deed restriction,	
10. APPLICANT, AGENT, OWNER, AN If the Applicant(s), Agent(s), Owner registered with the State Corporation	r(s), or Contractor(s) Islare Commission (SCC).	a company, please use the co		
READ ALL OF THE FOLLOWING CAREFULLY BEFORE SIGNING  PRIVACY ACT STATEMENT: The Department of the Army permit program is authorized by Section 10 of the Rivers and Harbors Act of 1899, Section 404 of the Clean Water Act, and Section 103 of the Marine Protection Research and Sanctuaries Act of 1972. These laws require that individuals obtain permits that authorize structures and work in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumpling it into ocean waters prior to undertaking the activity. Information provided in the Joint Permit Application will be used in the permit review process and is a matter of public record once the application is filled. Disclosure of the requested information is voluntary, but it may not be possible to evaluate the permit application or to issue a permit if the information requested is not provided.				
CERTIFICATION: I am hereby applying for Local Wetlands Boards for the activities I regulatory or advisory agency to enter upon conditions, both in reviewing a proposal to	have described herein. I agr on the premises of the oroico	ee to allow the duly authorized re	presentatives of any	
In addition, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.				
is/Are the Applicant(s) and Owner(s) the s	Total Control of the			
Applicant's name & title (printed or typed).  MICHAEL GELARDI - May	vice President se	cond applicant's name & tille, if ap	oplicable (printed or typed)	
Applicant's signature - 1	the street of th	cond applicant's signature		
Date 10/26/16	Da			
(Required for VMRC permit actions only) Property owner's name, if different from A	pplicant Se	equired for VMRC permit actions of conditions of condition		
Owner's signature, if different from Applica	ani Sed	cond owner's signature		
Date	Da	е	-	

IMPACT AREA 4

	11111111111	. 1
8. HISTORIC RESOURCES INFORMATION (Continued)		
Has a survey to locate archeological sites and/or historic structures been carried out on the property yes No Uncertain	erty?	
If Yes, please provide the following information: Date of Survey:		
Name of firm:	·	
Is there a report on file with the Virginia Department of Historic Resources?Yes No	Uncertain	
Title of Cultural Resources Management (CRM) report:		
Was any historic property located? Yes No Uncertain		

## 9. WETLANDS, WATERS, AND DUNES/BEACHES IMPACT INFORMATION

Report each impact site in a separate column. If needed, attach additional sheets using a similar table format. Please ensure that the associated project drawings clearly depict the location and footprint of each numbered impact site. For dredging, mining, and excavating projects, use Section 18.

dreaging, mining, and excavating project	Impact site number	Impact site number	Impact site number
	4	impeorate manipol	impaot site namber
Impact description (use all that apply): F=fill EX=excavation S=Structure T=tidal NT=non-tidal TE=temporary PE=permanent PR=perennial IN=intermittent SB=subaqueous bottom DB=dune/beach IS=hydrologically isolated V=vegetated NV=non-vegetated MC=Mechanized Clearing of PFO (Example: F, NT, PE, V)	F,NT, PE, NV  STORMWATER POUDS EXCAVATED FROM UPLANDS		,
Wetland/waters impact area (square feet)	6970 A		
Dune/beach impact area (square feet)	D		
Stream dimensions at impact site (length and average width in linear feet, and area in square feet)	N/A		
Volume of fill below Mean High Water or Ordinary High Water (cubic yards)	103204		
Cowardin classification of impacted wetland/water or geomorphological classification of stream Example wetland: PFO; Example stream: wide; bank eroding; braided channel; Example stream: 'C' channel	PUBHX		
Average stream flow at site (flow rate under normal rainfall conditions in cubic feet per second)	<zcfs< td=""><td></td><td></td></zcfs<>		
Contributing drainage area (acres or square miles)	130AC		

A WET ANDOMATERS WELCTING	CONTRACTION I A CONTRACT		A. B. Sanding and W.	
9. WETLANDS/WATERS IMPACT INFO	RIMATION (Continued)			
DEQ classification of impacted resource(s): Estuarine Class II Non-tidal waters Class III Mountainous zone waters Class IV Stockable trout waters Class V Natural trout waters Class VI Wetlands Class VI	4 II			
For DEQ permitting purposes, also sut the Footnotes section in the form instr	uctions.		·	
For DEQ permitting purposes, also sub streams that are located within the pro conservation easement, restrictive cov	posed project or comp	ensation areas that are also under		
<ol> <li>APPLICANT, AGENT, OWNER, AN If the Applicant(s), Agent(s), Owner registered with the State Corporation</li> </ol>	r(s), or Contractor(s) is		ompany name(s) that is/are	
		CAREFULLY BEFORE SIGNING		
PRIVACY ACT STATEMENT: The Department of the Army permit program is authorized by Section 10 of the Rivers and Harbors. Act of 1899, Section 404 of the Clean Water Act, and Section 103 of the Marine Protection Research and Sanctuaries Act of 1972. These laws require that individuals obtain permits that authorize structures and work in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters prior to undertaking the activity. Information provided in the Joint Permit Application will be used in the permit review process and is a matter of public record once the application is filed. Disclosure of the requested information is voluntary, but it may not be possible to evaluate the permit application or to issue a permit if the information requested is not provided.  CERTIFICATION: I am hereby applying for permits typically issued by the DEQ, VMRC, U.S. Army Corps of Engineers, and/or Local Wetlands Boards for the activities I have described herein. I agree to allow the duly authorized representatives of any regulatory or advisory agency to enter upon the premises of the project site at reasonable times to inspect and photograph site				
In addition, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.				
Ts/Are the Applicant(s) and Owner(s) the s	same?YesNo			
Applicant's name & title (printed or typed)		Second applicant's name & title, if a	pplicable (printed or typed)	
Applicant's signature		Second applicant's signature		
Date		Date		
(Required for VMRC permit actions only) Property owner's name, if different from A		(Required for VMRC permit actions Second property owner's name, if a	only) oplicable	
Owner's signature, if different from Applic	ant	Second owner's signature		
Data		Data		

10. APPLICANT, AGENT, OWNER, AND CONTRACTOR CERTIFICATIONS (Continued)					
If the Applicant(s), Agent(s), Owner(s), or Contractor(s) is/are a company, please use the company name(s) that is/are registered with the State Corporation Commission (SCC).					
CERTIFICATION OF AUTHORIZATION TO ALLOW AGENT	STOV ORON PRINCANTISSINGERALEN	FARRICARIE			
		70 ( COABLE)			
I (we), TRI-CIT PROFERENES (and)  APPLICANT'S NAME(S) – complete the second blank if m	*				
APPLICANT'S NAME(S) - complete the second blank if m	nore than one Applicant				
hereby certify that I (we) have authorized ROTH GUIROVAL	ENCYC (and)				
hereby certify that I (we) have authorized ROTH GUILOVAL AGENT'S NAME(S) -	complete the second blank if more than one Age	ent			
to act on my (our) behalf and take all actions necessary to the pro					
standard and special conditions attached. I (we) hereby certify the	at the information submitted in this application in	s true and accurate			
to the best of my (our) knowledge.  Applicant's signature	Second applicant's signature, if applicable				
mo Vil Z Hilsh	ascond applicant's signature, it applicable				
Date Color	Dale				
10/26/2011					
Agent's signature with the	Second agent's signature and title, if applicab	le			
Date William	Date				
19/25/16	Date				
CONTRACTOR ACKNOWLE	DGEMENT (IF APPLICABLE)				
1/-5					
I (we). Alor Sereted (ar APPLICANT'S NAME(S) – complete the second blank if m	(d)				
have contractedCONTRACTOR'S NAME(S) complete the sec	(and)				
to perform the work described in this Joint Permit Application, signed and dated					
I (we) will read and abide by all conditions as set forth in all Feder	I (we) will read and abide by all conditions as set forth in all Federal, State, and Local permits as required for this project. I (we)				
understand that failure to follow the conditions of the permits may constitute a violation of applicable Federal State, and Local					
statutes and that we will be liable for any civil and/or criminal penalties imposed by these statutes.					
In addition, I (we) agree to make available a copy of any permit to	any regulatory representative visiting the project	ct site to ensure			
permit compliance. If I (we) fall to provide the applicable permit upon request, I (we) understand that the representative will have the option of stopping our operation until it has been determined that we have a properly signed and executed permit and are in full					
compliance with all of the terms and conditions.					
Contractor's name or name of firm (printed/typed)	Contractor's name or name of firm (printed/typed)  Contractor's or firm's mailing address				
Contractor's signature and title	Contractor's license number	Date			
Applicant's signature	Second applicant's signature. If applicable				
Date	Date				
		[			



## END OF GENERAL INFORMATION

The following sections are activity-specific. Fill out only the sections that apply to your particular project.

IMPACT AREA 1

	D FARM DITCHES THROUGH UPLANDS			
<ol> <li>FILL (not associated with backfilled shoreline structures boathouses) IN WETLANDS OR WATERS, OR ON DUNES/Bi</li> </ol>	) AND OTHER STRUCTURES (other than piers and EACHES			
Source and composition of fill material (percentage sand, silt, cla	y, rock): ONSITE FILL MATERIAL FROM			
STORMWATER POND EXCAVATION 50%	LOAM; 3070 SAND; 2070 CLAY			
	s) that fill material from off-site locations is free of toxics. If not free ing from commercial supplier or disposal site). Documentation is			
Explain the purpose of the filling activity and the type of structure	to be constructed over the filled area (if any):			
Directes Flued to create subdivision -				
Describe any structure that will be placed in wetlands/waters or o	л a beach dune and its purpose:			
None				
Will the structure be placed on pilings?Yes No	Total area occupied by any structure.			
How far will the structure be placed channelward from the back edge of the dune?	How far will the structure be placed channelward from the back edge of the beach?			
	<u> </u>			
20. NONTIDAL STREAM CHANNEL MODIFICATIONS FOR RESTORATION OR ENHANCMENT, or TEMPORARY OR PERMANENT RELOCATIONS  If proposed activities are being conducted for the purposes of compensatory mitigation, please attach separate sheets of paper providing all information required by the most recent version of the stream assessment methodology approved by the Norfolk District of the U.S. Army Corps of Engineers and the Virginia Department of Environmental Quality, in lieu of completing the questions below. Required information outlined by the methodology can be found at: <a href="http://www.nao.usace.armv.mi/Missions/Regulatory/UnifiedStream/Methodology.aspx">http://www.nao.usace.armv.mi/Missions/Regulatory/UnifiedStream/Methodology.aspx</a> or http://www.deg.virginia.gov/Programs/Water/Wetlands/Streams/Mitigation.aspx.				
Has the stream restoration project been designed by a local, stat the name of the agency here:	e, or federal agency?Yes _ No. If yes, please include			
Is the agency also providing funding for this project?Yes	No			
Linear feet of stream impact:				
Contributing drainage area:acres orsc	uare miles			
	posed average stream flow at site after modifications (flow rate er normal rainfall conditions):cfs			
Explain, in detail, the method to be used to stabilize the banks:				
Explain the composition of the existing stream bed (percent cobb	le, rock, sand, etc.):			

IMPACT AREA Z

SPARSELY VESCTATED FARM DITCHES THROUGH UPLANDS

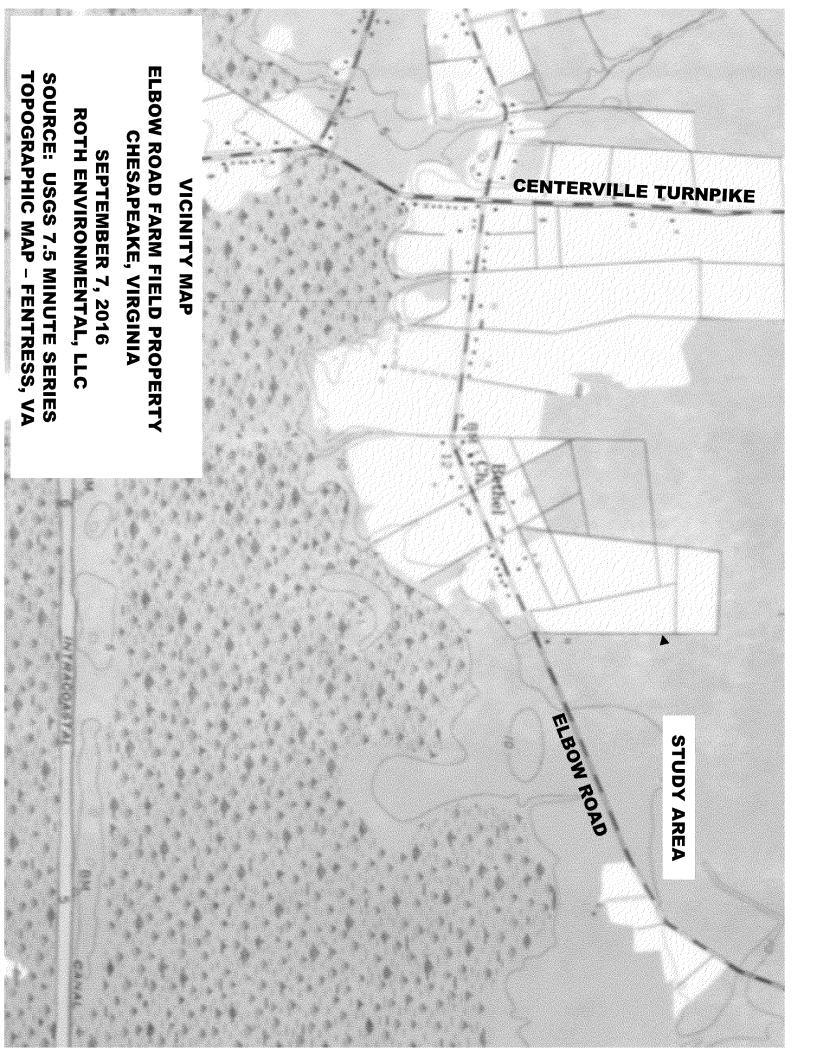
19. FILL (not associated with backfilled shoreline structures) AND OTHER STRUCTURES (other than piers and boathouses) IN WETLANDS OR WATERS. OR ON DUNES/BEACHES Source and composition of fill material (percentage sand, silt, clay, rock): DNS TE FIL MATERIAL FROM

DTORMWATER POND EXCAVATION - 5000 John; 3000 SAND; 2000 CLAY 5070 loam; 30% SAND; 20% CLAY Provide documentation (i.e. laboratory results or analytical reports) that fill material from off-site locations is free of toxics. If not free of toxics, provide documentation of proper disposal (i.e. bill of lading from commercial supplier or disposal site). Documentation is not necessary for fill material obtained from on-site areas. Explain the purpose of the filling activity and the type of structure to be constructed over the filled area (if any): DITCHES FILED TO CLEATE SUBDIVISION Describe any structure that will be placed in wetlands/waters or on a beach dune and its purpose: None Will the structure be placed on pilings? \_\_\_\_\_\_ No Total area occupied by any structure. NA \_\_ Square Feet How far will the structure be placed channelward from the back edge of the beach? How far will the structure be placed channelward from the back edge of the dune? \*\* IA feet 20. NONTIDAL STREAM CHANNEL MODIFICATIONS FOR RESTORATION OR ENHANCMENT, OF TEMPORARY OR PERMANENT RELOCATIONS If proposed activities are being conducted for the purposes of compensatory mitigation, please attach separate sheets of paper providing all information required by the most recent version of the stream assessment methodology approved by the Norfolk District of the U.S. Army Corps of Engineers and the Virginia Department of Environmental Quality, in lieu of completing the questions below. Required information outlined by the methodology can be found at: http://www.nao.usace.army.mil/Missions/Regulatory/UnifiedStreamMethodology.aspx\_or http://www.deg.virginia.gov/Programs/Water/WetlandsStreams/Mitigation.aspx Has the stream restoration project been designed by a local, state, or federal agency? \_ \_ Yes \_ \_No. If yes, please include the name of the agency here: Is the agency also providing funding for this project? Linear feet of stream impact: Contributing drainage area: \_acres or \_ \_square miles Existing average stream flow at site (flow rate under Proposed average stream flow at site after modifications (flow rate normal rainfall conditions): under normal rainfall conditions): Explain, in detail, the method to be used to stabilize the banks: Explain the composition of the existing stream bed (percent cobble, rock, sand, etc.):

19. FILL (not associated with backfilled shoreline structures) AND OTHER STRUCTURES (other than piers and boathouses) IN WETLANDS OR WATERS, OR ON DUNES/BEACHES Source and composition of fill material (percentage sand, silt, clay, rock): ONSITE FILL MATERIAL FROM STORMWHEEL POWD EXCAVATION - 5070 LAMY; 3070 SAMD J 2070 CLAY Provide documentation (i.e. laboratory results or analytical reports) that fill material from off-site locations is free of toxics. If not free of toxics, provide documentation of proper disposal (i.e. bill of lading from commercial supplier or disposal site). Documentation is not necessary for fill material obtained from on-site areas. Explain the purpose of the filling activity and the type of structure to be constructed over the filled area (if any): DITCHES FLUED TO CREATE SUBDIVISION Describe any structure that will be placed in wetlands/waters or on a beach dune and its purpose: None Will the structure be placed on pilings?\_\_\_\_Y Yes\_\_No Total area occupied by any structure. NA Square Feet How far will the structure be placed channelward from the back edge of the dune? How far will the structure be placed channelward from the back edge of the beach? 20. NONTIDAL STREAM CHANNEL MODIFICATIONS FOR RESTORATION OR ENHANCMENT, or TEMPORARY OR PERMANENT RELOCATIONS If proposed activities are being conducted for the purposes of compensatory mitigation, please attach separate sheets of paper providing all information required by the most recent version of the stream assessment methodology approved by the Norfolk District of the U.S. Army Corps of Engineers and the Virginia Department of Environmental Quality, in lieu of completing the questions below. Required information outlined by the methodology can be found at: http://www.nao.usace.army.mil/Missions/Regulatory/UnifiedStreamMethodology.aspx\_or http://www.deg.virginia.gov/Programs/Water/WetlandsStreams/Mitigation.aspx Has the stream restoration project been designed by a local, state, or federal agency? \_ \_ Yes \_ \_No. If yes, please include the name of the agency here: is the agency also providing funding for this project? Linear feet of stream impact: Contributing drainage area: \_ \_acres or \_ square miles Existing average stream flow at site (flow rate under Proposed average stream flow at site after modifications (flow rate normal rainfall conditions): under normal rainfall conditions): Explain, in detail, the method to be used to stabilize the banks: Explain the composition of the existing stream bed (percent cobble, rock, sand, etc.):

IMPACT AREA 4

JARMWHIER FONDS	CACAVATED PROM UPLANDS			
<ol> <li>FILL (not associated with backfilled shoreline structures boathouses) IN WETLANDS OR WATERS. OR ON DUNES/BE</li> </ol>	AND OTHER STRUCTURES (other than piers and			
Source and composition of fill material (percentage sand, silt, clay	1, rock): DUSITE FILL MATERIAL FROM SETS LOAM; 307, SAND; 201, CLAY			
	s) that fill material from off-site locations is free of toxics. If not free			
Explain the purpose of the filling activity and the type of structure	· ·			
DITCHES FILED TO CLEATE SUBDIV				
Describe any structure that will be placed in wetlands/waters or o	n a beach dune and its purpose:			
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Will the structure be placed on pilings?YesNo	Total area occupied by any structure.  Square Feet			
How far will the structure be placed channelward from the back edge of the dune?   A feet	How far will the structure be placed channelward from the back edge of the beach?			
20. NONTIDAL STREAM CHANNEL MODIFICATIONS FOR REPERMANENT RELOCATIONS  If proposed activities are being conducted for the purposes of con-	npensatory mitigation, please attach separate sheets of paper			
providing all information required by the most recent version of the stream assessment methodology approved by the Norfolk District of the U.S. Army Corps of Engineers and the Virginia Department of Environmental Quality, in lieu of completing the questions below. Required information outlined by the methodology can be found at: <a href="http://www.nao.usace.army.mil/Missions/Requiatory/UnifiedStreamMethodology.aspx">http://www.nao.usace.army.mil/Missions/Requiatory/UnifiedStreamMethodology.aspx</a> or <a href="http://www.deq.virginia.gov/Programs/Water/WetlandsStreams/Mitigation.aspx">http://www.deq.virginia.gov/Programs/Water/WetlandsStreams/Mitigation.aspx</a> .				
Has the stream restoration project been designed by a local, state, or federal agency?YesNo. If yes, please include the name of the agency here:				
Is the agency also providing funding for this project? Yes No				
Linear feet of stream impact:				
Contributing drainage area:acres orsq	uare miles			
	posed average stream flow at site after modifications (flow rate er normal rainfall conditions):			
Explain, in detail, the method to be used to stabilize the banks:				
Explain the composition of the existing stream bed (percent cobbl	e, rock, sand, etc.):			





# ELBOW ROAD FARM FIELD PROJECT THREATENED AND ENDANGERED SPEICES REVIEW CHESAPEAKE, VIRGINIA RE PROJECT #06-006 OCTOBER 12, 2016

Roth Environmental performed an IPaC Review through the Fish & Wildlife Service. This report identified the Northern Long Eared Bat (federally threatened) as a species with summer habitat in the project area.

In addition, the Virginia Department of Game and Inland Fisheries (VDGIF) Environmental Services Section (ESS) was researched to provide information on state threatened and endangered species. The state database found several species of concern within the project area. Species that could potentially use the site as habitat are discussed below.

## Northern Long-Eared Bat - (Myotis septentrionalis)

Federally Threatened - The northern long-eared bat is a medium-sized bat with a body length of 3 to 3.7 inches and a wingspan of 9 to 10 inches. Their fur color can be medium to dark brown on the back and tawny to pale-brown on the underside.

The northern long-eared bat is federally listed as a threatened species under the Endangered Species Act. Threatened species are animals and plants that are likely to become endangered in the foreseeable future. Identifying, protecting, and restoring endangered and threatened species is the primary objective of the U.S. Fish and Wildlife Service's endangered species program. The City of Newport News is identified as a White-Nosed Syndrome Buffer Zone Per Interim 4(d) Rule.

Winter Habitat: Northern long-eared bats spend winter hibernating in caves and mines, called hibernacula. They use areas in various sized caves or mines with constant temperatures, high humidity, and no air currents. Within hibernacula, surveyors find them hibernating most often in small crevices or cracks, often with only the nose and ears visible.

Summer Habitat: During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees). Males and non-reproductive females may also roost in cooler places, like caves and mines. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices. This bat has also been found rarely roosting in structures, like barns and sheds.

The proposed project does not contain any areas that could be used as hibernacula (caves, mine shafts, or similar habitat). The habitat type in the area is a coastal plain flat. There

is little natural topography in the project area. Therefore, the property is not appropriate winter habitat for the bats. The areas of mature forest could potentially be used as summer/breeding habitat for the bats as they are documented to live underneath bark, in tree cavities, and in crevices in mature trees. There are, however, no known roost trees within the site.

As the project will involve clearing approximately 4.5-acres of forested areas, there are areas in which an incidental take could potentially happen if the northern long eared bat was roosting on the site.

The applicant anticipates that they will perform land-clearing activities during the summer season. We are requesting that the agencies coordinate with the FWS to remove any time of year restrictions for the land clearing activity.

### Barking Tree Frog (Hyla gratiosa)

State Threatened - Choruses gather at permanent water, streams, cypress ponds, and bayheads to breed. All Virginia breeding sites were found in graminoid dominated temporary ponds. Most of the breeding sites are in open-canopied pools. The forest surrounding the breeding ponds are the supposed nonbreeding habitat. Reproduction sites used in Virginia include pocosin wetlands, flooded weedy sites in agricultural areas, weedy flooded ponds under powerlines, and in coastal plain ephemeral ponds. Common locally in sandy areas near shallow ponds in pine savannas and in low wet woods and swamps. The major threat to this species is from continued logging of stands of native pine. Particularly detrimental is the conversion of these mature pine stands to high density monocultures of loblolly pine. The preferred habitat of this species includes closed canopy and moist, sandy, friable soils. Swamps, cypress ponds, pocosins, permanent ponds, vernal pools, or lakes may be used for breeding habitat.

The 60-acre Elbow Road Farm Field Project is composed of farmed field areas (42.8-acres), two small areas of mature forest (total of 4.5-acres), and three areas of early successional forest (12.7-acres).

The wetlands/water features on the property include forested nontidal wetlands (limited early spring inundation), farm ditches, and two stormwater ponds (constant water elevations with no herbaceous pond fringes).

None of the habitat listed above is present on the site. We therefore conclude that the site does not contain breeding habitat as listed above.

## Eastern chicken turtle (Deirochelys reticularia reticularia)

State Endangered - In Virginia, the chicken turtle is found in freshwater cypress ponds among the forested dunes. In other parts of its range, it inhabits quiet waters such as ponds,

lakes, and ditches. They do not abandon aquatic habitats even though the ponds nearly dried during a drought year.

Eastern chicken turtles have not been observed on the project site. Based on the habitat found on site, this species is not anticipated to be found there.

### Canebrake rattlesnake (Crotalus horridus)

State Endangered - Canebrakes occupy hardwood and mixed hardwood-pine forests, cane fields, and the ridges and glades of swampy areas. The preferred habitat is mature hardwood forests containing numerous logs and a layer of leaves and humus. They overwinter in the base of hollow trees or in stumps. Unique habitat associations include downed logs and bottomland hardwoods. They also occupy natural and anthropogenic open habitats adjacent to forests.

The majority of the habitat on the project consists of an ongoing farming operation. These areas are routinely planted, plowed, and harvested.

The attached information sheets that discuss and aid in the identification of canebrake rattlesnakes will be distributed to the contractors who will be working on-site. If a canebrake rattlesnake is encountered during construction, the contractors will not disturb the snake and call J.D. Kleopfer at VDGIF to come and move it.

## Bald Eagle (Haliaeetus leucocephalus)

Roth Environmental also performed an eagle nest search for the project and vicinity using the Center for Conservation Biology's Virginia Bald Eagle Nest Locator. The nearest bald eagle nest is located 0.87-miles to the west of the southernmost project limit.

There are no restrictions/buffers on the property due to bald eagles or their nests.

## Roseate Tern (Sterna dougallii dougallii)

State Endangered - The roseate tern was identified as an endangered species within the southeastern Virginia coastal area. These terns are listed in the literature as being strictly a coastal species. They are usually observed foraging in the nearshore surf. The optimal nesting habitat is described as open sandy beaches isolated from human activity. They have been known to use a variety of substrates, including pea gravel, open sand, overhanging rocks, and salt marshes for nesting. As none of these types of habitats are found within the project site, the proposed development will not have an affect on the roseate tern.

Macintosh HD:Users:Roth:Documents:Roth Environmental, LLC:Projects:2006:06-006.centerville:2016 Farm Field JPA:T&E:2016.10.12.Threatened and Endangered Species. Elbow.docx

endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

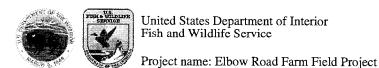
Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan

(http://www.fws.gov/windenergy/eagle\_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



## **Official Species List**

## Provided by:

Virginia Ecological Services Field Office 6669 SHORT LANE GLOUCESTER, VA 23061 (804) 693-6694 http://www.fws.gov/northeast/virginiafield/

Consultation Code: 05E2VA00-2017-SLI-0115

Event Code: 05E2VA00-2017-E-00125

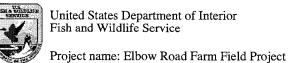
**Project Type:** DEVELOPMENT

**Project Name:** Elbow Road Farm Field Project

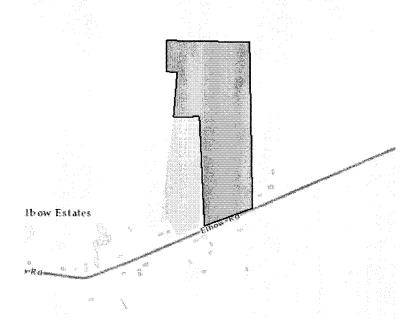
**Project Description:** The proposed project will subdivide approximately 51 acres of land into 157 residential subdivision lots. Associated roads, stormwater management features, and green areas are also proposed as part of this project.

**Please Note:** The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.





## **Project Location Map:**



**Project Coordinates:** MULTIPOLYGON (((-76.16795539855957 36.74005341166981, -76.16823434829712 36.744678799961235, -76.16958618164062 36.74464441148579, -76.16939306259155 36.746552948569146, -76.16995096206665 36.746570142381195, -76.16995096206665 36.74791124785123, -76.16553068161011 36.747825280254936, -76.16540193557739 36.74080999982693, -76.16795539855957 36.74005341166981)))

Project Counties: Chesapeake, VA





# United States Department of Interior Fish and Wildlife Service

Project name: Elbow Road Farm Field Project

## **Endangered Species Act Species List**

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Population: Wherever found			
septentrionalis)			
Northern long-eared Bat (Myotis	Threatened		
Mammals	Status	Has Critical Habitat	Condition(s)



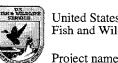
United States Department of Interior Fish and Wildlife Service

Project name: Elbow Road Farm Field Project

## Critical habitats that lie within your project area

There are no critical habitats within your project area.





United States Department of Interior Fish and Wildlife Service

Project name: Elbow Road Farm Field Project

## Appendix A: FWS National Wildlife Refuges and Fish Hatcheries

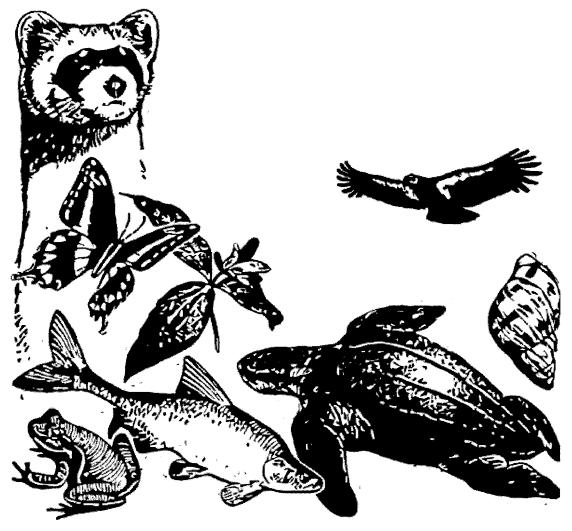
There are no refuges or fish hatcheries within your project area.

# Elbow Road Farm Field Project

# IPaC Trust Resources Report

Generated October 12, 2016 01:40 PM MDT, IPaC v3.0.9

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



IPaC - Information for Planning and Conservation (<a href="https://ecos.fws.gov/ipac/">https://ecos.fws.gov/ipac/</a>): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

# **Table of Contents**

H	PaC Trust Resources Report	1
	Project Description	1
	Endangered Species	_
	Migratory Birds	3
	Refuges & Hatcheries	6
	Wetlands	7

## **Endangered Species**

Proposed, candidate, threatened, and endangered species are managed by the <u>Endangered Species Program</u> of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

<u>Section 7</u> of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Documents section in IPaC or from the local field office directly.

The list of species below are those that may occur or could potentially be affected by activities in this location:

## **Mammals**

Northern Long-eared Bat Myotis septentrionalis

Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=A0JE

## Critical Habitats

There are no critical habitats in this location

## Migratory Birds

Birds are protected by the <u>Migratory Bird Treaty Act</u> and the <u>Bald and Golden Eagle</u> <u>Protection Act</u>.

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.<sup>[1]</sup> There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern
   http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds
   http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data http://www.birdscanada.org/birdmon/default/datasummaries.isp

The following species of migratory birds could potentially be affected by activities in this location:

American Kestrel Falco sparverius pau	IIIS
---------------------------------------	------

Bird of conservation concern

On Land Season: Year-round

## American Oystercatcher Haematopus palliatus

Bird of conservation concern

On Land Season: Year-round

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0G8

#### American Bittern Botaurus lentiginosus

Bird of conservation concern

On Land Season: Wintering

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0F3

### Bald Eagle Haliaeetus leucocephalus

Bird of conservation concern

On Land Season: Year-round

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B008

Black Rail Laterallus jamaicensis

On Land Season: Breeding

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B09A

Black Skimmer Rynchops niger

On Land Season: Breeding

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0EO

Black-throated Green Warbler Dendroica virens

On Land Season: Breeding

Brown-headed Nuthatch Sitta pusilla

On Land Season: Year-round

Fox Sparrow Passerella iliaca

On Land Season: Wintering

Gull-billed Tern Gelochelidon nilotica

On Land Season: Breeding

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0JV

Hudsonian Godwit Limosa haemastica

At Sea Season: Migrating

Least Bittern Ixobrychus exilis

On Land Season: Breeding

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B092

Lesser Yellowlegs Tringa flavipes

On Land Season: Wintering

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0MD

Loggerhead Shrike Lanius Iudovicianus

On Land Season: Year-round

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0FY

Marbled Godwit Limosa fedoa

On Land Season: Wintering

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0JL

Nelson's Sparrow Ammodramus nelsoni

On Land Season: Wintering

Peregrine Falcon Falco peregrinus

On Land Season: Wintering

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0FU

Pied-billed Grebe Podilymbus podiceps

On Land Season: Year-round

**Prairie Warbler** Dendroica discolor

On Land Season: Breeding

Prothonotary Warbler Protonotaria citrea

On Land Season: Breeding

Bird of conservation concern

Purple Sandpiper Calidris maritima

On Land Season: Wintering

Red Knot Calidris canutus rufa

On Land Season: Wintering

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0DM

Red-headed Woodpecker Melanerpes erythrocephalus

On Land Season: Year-round

Rusty Blackbird Euphagus carolinus

On Land Season: Wintering

Saltmarsh Sparrow Ammodramus caudacutus

On Land Season: Year-round

**Seaside Sparrow** Ammodramus maritimus

On Land Season: Year-round

Sedge Wren Cistothorus platensis

On Land Season: Wintering

Short-billed Dowitcher Limnodromus griseus

On Land Season: Wintering

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0JK

Short-eared Owl Asio flammeus

On Land Season: Wintering

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0HD

Snowy Egret Egretta thula

On Land Season: Breeding

Swainson's Warbler Limnothlypis swainsonii

On Land Season: Breeding

Whimbrel Numenius phaeopus

On Land Season: Wintering

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0JN

Wood Thrush Hylocichla mustelina

On Land Season: Breeding

Worm Eating Warbler Helmitheros vermivorum

On Land Season: Breeding

Yellow Rail Coturnicops noveboracensis

On Land Season: Wintering

http://ecos.fws.gov/tess\_public/profile/speciesProfile.action?spcode=B0JG

Bird of conservation concern

### Wildlife refuges and fish hatcheries

There are no refuges or fish hatcheries in this location

#### Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army</u> Corps of Engineers District.

#### DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

#### DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

#### **DATA PRECAUTIONS**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

This location overlaps all or part of the following wetlands:

## Freshwater Emergent Wetland PEM1Bd

# Freshwater Forested/shrub Wetland PF01Bd

IPaC Trust Resources Report Wetlands

A full description for each wetland code can be found at the National Wetlands Inventory website: <a href="http://107.20.228.18/decoders/wetlands.aspx">http://107.20.228.18/decoders/wetlands.aspx</a>

# Virginia's Wildlife

Species Profile



#### Canebrake Rattlesnake

Crotalus horridus atricaudatus

Status: State Endangered

Virginia Department of Game and Inland Fisheries Wildlife Diversity Division Nongame and Endangered Wildlife Program 4010 West Broad Street P.O. Box 11104 Richmond, VA 23230-1104 804-367-8999



www.dgif.state.va.us

Wildlife Diversity Biologists
(I) Williamsburg: 757-253-7072
(II) Forest: 804-525-7522
(III) Blacksburg: 540-951-7923
(IV) Verona: 540-248-9360

(V) Fredericksburg: 540-899-4169

Support Virginia's Nongame Wildlife Program!

Remember the Nongame Wildlife Tax Checkoff as you do your Virginia state income taxes this year.

#### Virginia's Wildlife Species Profile: Canebrake Rattlesnake

#### Virginia Distribution: Southeastern Coastal Plain

#### **Characteristics**

The canebrake rattlesnake is a large venomous snake reaching a maximum length in Virginia of about 5 1/2 feet. As the only rattlesnake found in southeastern Virginia, it is easily identified by its distinctive black tail and rattle. The body color is usually pinkish, gray, yellow, or light brown, with brown to black chevrons. A brown or chestnut middorsal stripe is usually present, as is a yellowish-gold to brown stripe from the eye to the back of the jaw. Canebrakes have a wide head with a deep pit on each side between the eye and nostril, and elliptical pupils.

#### Feeding

Canebrakes feed primarily on gray squirrels, and typically feed only once or twice each year. They may also capture and eat other rodents, rabbits, and birds.

#### Habitat and Distribution

The canebrake is a physically distinct variant of the timber rattlesnake (Crotalus horridus) which ranges from New England to Minnesota and south to Florida and Texas. Whether the canebrake warrants status as a subspecies is in question, but populations occurring southward from southern Missouri, western Tennessee, and southeastern Virginia are considered to represent this population.

In Virginia, while timber rattlesnakes are widespread in the mountain regions and western Piedmont, canebrakes occur only as two populations in the southeastern corner of the state. On the Lower Peninsula they occur in Hampton, Newport News, and York County; and south of the James River they are still found in Isle of Wight County, and in the Cities of Suffolk, Chesapeake, and Virginia Beach.



Figure 1. Canebrake and timber rattlesnake distribution in Virginia and the United States.

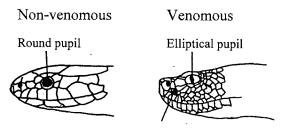
*FACT:* There are 30 species of snakes found in Virginia, but the canebrake rattlesnake is the only snake listed by the DGIF as endangered or threatened in the Commonwealth.

Mature hardwood forests are the preferred habitat of canebrake rattlesnakes, but the snakes also are found in mixed hardwood-pine forests, cane thickets, and in the ridges and glades of swamps. They prefer areas with numerous logs and a significant layer of leaves and humus. Canebrakes overwinter in the bases of hollow trees and stumps, and in the underground tunnels resulting from stump and root decomposition.

#### Reproduction

Canebrakes mature at about 4-6 years of age, and reproduce only every 2-3 years. Mating occurs in midsummer through fall, and litters of 7-18 young are born the following August or September. The young are about 12 inches in length at birth, and resemble the adults.

#### Morphology: Snakes



Facial pit

Figure 2. Facial distinctions between venomous and non-venomous snakes of Virginia.

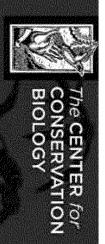
#### Threats, and How You Can Help

Habitat destruction or modification, and persecution by humans, are the primary threats to canebrake rattlesnakes. Despite their reputation, most canebrakes are reluctant to bite in the wild, preferring to lay undetected among the leaf litter. They rarely rattle even when approached, but if disturbed or startled they may strike in self-defense. Most rattlesnake bites occur when humans attempt to kill, capture, or handle a snake.

If you see a rattlesnake in the wild, do not disturb it. If you are concerned about its presence, please call the local office of the Virginia Department of Game and Inland Fisheries. If a rattlesnake bites you, do not attempt to administer first aid; rather, immediately seek treatment for snakebite at a medical facility.

For additional information, consult A Guide to Endangered and Threatened Species in Virginia by K. Terwilliger and J.R. Tate, or The Reptiles of Virginia by Joseph C. Mitchell.

Citation: Fernald, RT. 1999. Canebrake rattlesnake: Crotalis horridus atricaudatus. Virginia's wildlife species profile No. 030013.1 (Fernald RT, series editor). Richmond: Virginia Department of Game and Inland Fisheries.



About Us What We Do

# CCB MAPPING PORTAL

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**CLOSEST EAGLE'S NEST** 0.87 miles **PROJECT AREA** 



#### ELBOW ROAD FARM FIELD PROJECT HISTORIC RESOURCES REVIEW CHESAPEAKE, VIRGINIA RE PROJECT #06-006 OCTOBER 12, 2016

Roth Environmental performed a historic resource review through the Virginia Department of Historic Resources for the project area and the area immediately surrounding the site. The review verified the historic resource information provided by the Corps of Engineers in the wetland delineation confirmation.

This review revealed two architectural resources and two archaeological resources within the study area with two additional architectural resources off-site. These sites were identified and studied as part of the archaeological and architectural surveys for the proposed Southeastern Parkway and Greenbelt performed by Coastal Carolina Research, Inc. Reports for each of these surveys is on file at DHR.

#### **Architectural Resources**

The two architectural resources listed for the study area identified in the wetland delineation are an unmarked cemetery (131-5335) and a former house (131-0301). The unmarked cemetery is identified in the DHR maps as being located in the southwestern corner of the study area. This is on property that is owned by the City of Chesapeake and is not part of the proposed subdivision. This site contains a single, light colored stone marker. The report states that it is similar to a cemetery headstone but does not have any inscriptions. There were not burial depressions, footstones, or other funerary evidence. Given that there was no other evidence for the stone's existence, it was defined as a burial. DHR staff reviewed the report and agreed that the site is not eligible for the National Register of Historic Places (NRHP). This site is located outside the proposed development area and will not be impacted by the proposed development.

The second architectural resource is a former house. This house was demolished by the City of Chesapeake over ten years ago. As noted in the architectural survey, prior to its demolition, the house was seriously threatened due to vacancy and vandalism. The house was also located on the property owned by the City of Chesapeake and not part of the proposed development.

Two residential structures were identified south of Elbow Road that front the development. These structures are two residential houses that are listed as being build in the 1940s. The surveyor's assessment on file with DHR states, "These houses represent a design common for the period of construction and place. The structures lack any associations with significant events or persons in our history, and the architectural integrity of these houses has been diminished due to multiple alterations and additions

Elbow Road Farm Field Development October 12, 2016 Page 2 of 2

constructed by the current homeowners. These resources are recommended as not eligible for the NRHP under Criteria A, B, C, or D."

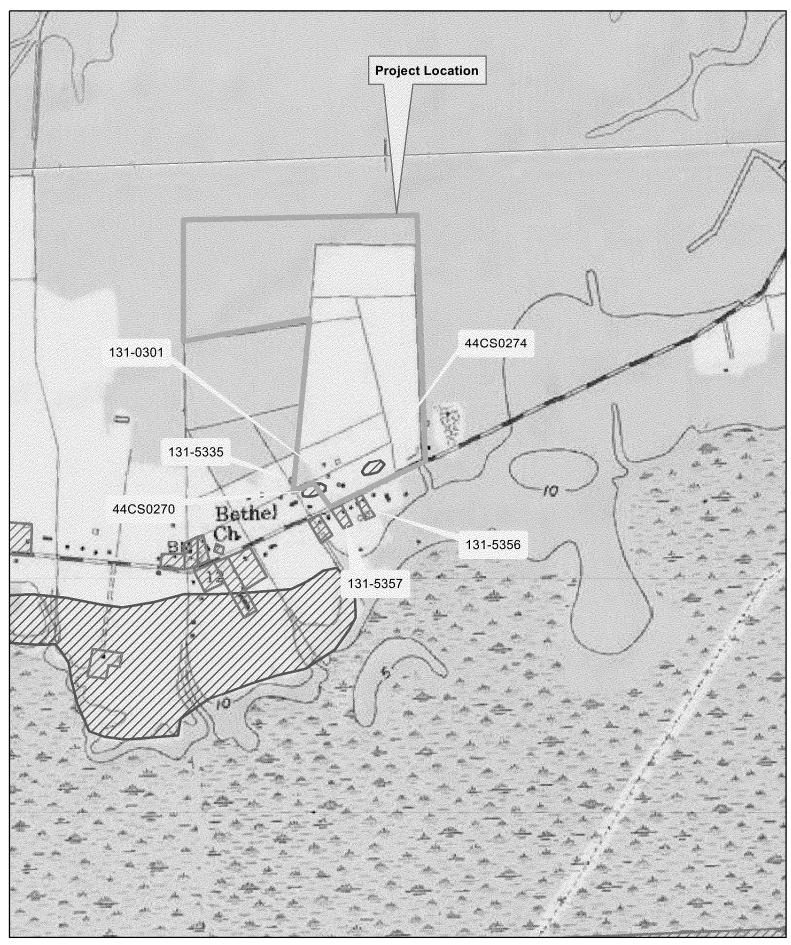
#### Archaeological Resources

Two archaeological sites were identified in the study area during the review. The first of these is a farmstead (44CS0270). This farmstead house burned approximately ten years ago. DHR lists the site as not eligible for listing on the NRHP. This house site is not located within the proposed area for development.

The second site was identified as a "trash scatter" area (44CS0274). Items identified in the artifact summary included "1porcellaneous ware, 1buff bodied stoneware, gray salt-glazed exterior, Albany slip interior, 2 clear bottle glass, with partial paper label, 1metal "eye ring", and one chain link, 2 bricks, and 1 clinker." These specimens were collected and are on file at VDHR.

The proposed development will not impact this area of trash scatter as it is situated within the proposed easement for the Southeastern Parkway/Expressway. The proposed subdivision is situated north of this corridor.

Macintosh HD: Users: Roth: Documents: Roth Environmental, LLC: Projects: 2006:06-006.centerville: 2016 Farm Field JPA: Historic Resources: 2016.10.12. Historic Resources: Elbow.docx



Centerville Farm Field Property Near 2014 Elbow Road Chesapeake, VA 23320 September 20, 2016 L. Leake

Legend

Architecture Resources

Individual Historic District Properties
Archaeological Resources
DHR Easements

Sources: VDHR 2015, USGS 2002
Records of the Virginia Department of Historic Resources (DHR) have been gathered over many years and the representation depicted is based on the field observation date and may not reflect current ground conditions. The map is for general illustration purposes and is not intended for engineering, legal or other site-specific uses. The map may contain errors and is provided "as-is-". Contact DHR for the most recent information as data is updated continually.





#### DEPARTMENT OF THE ARMY

US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

August 26, 2016

#### APPROVED JURISDICTIONAL DETERMINATION

Eastern Virginia Regulatory Section NAO-2016-0712 (Albemarle and Chesapeake Canal, North Landing River)

Tri-City Properties, LLC ATTN: Michael Gelardi 3333-24 Virginia Beach Blvd Virginia Beach, VA 23452

Dear Mr. Gelardi:

This letter is in regard to your request for verification of an approved jurisdictional determination for the waters of the U.S. (including wetlands) on a portion of a +428-acre property known as Centerville Properties. The subject property consists of a 110-acre area of three parcels located 0.9 miles east-northeast of the intersection of Elbow Road and Centerville Turnpike in Chesapeake, Virginia. The subject site includes tax map parcels 0390000000381, 0390000000382, and a limited portion of 0390000000380.

An on-site jurisdictional determination has found waters and wetlands regulated under Section 404 of the Clean Water Act (33 U.S.C. 1344) on the property listed above. Forested, non-tidal adjacent wetlands (approximately 30 acres) and tributaries (approximately 11,900 linear feet) have been identified on the site. This letter shall serve to confirm the wetlands delineation and jurisdictional waters, as shown on the map titled, "Wetland Delineation, Centerville Farm Field Site, Chesapeake, Virginia", revised August 5, 2016 by Roth Environmental, LLC (copy attached). Our basis for this determination is the application of the Corps' 1987 Wetland Delineation Manual (and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region) and the positive indicators of wetland hydrology, hydric soils, and hydrophytic vegetation. The wetland is a water of the United States and is part of a tributary system to interstate waters (33 CFR 328.3(a)). These waters meet the Corps' definition of waters of the United States, are part of a tributary system to interstate waters (33 CFR 328.3 (a)) and have an ordinary high water mark.

Discharges of dredged or fill material, including those associated with mechanized landclearing, into jurisdictional waters and/or wetlands on this site will require a Department of the Army permit and may require authorization by state and local authorities, including a Virginia Water Protection Permit from the Virginia Department of Environmental Quality (DEQ). This letter is a confirmation of the Corps jurisdiction for the waters and/or wetlands on the subject property and does not authorize any work in these jurisdictional areas. Please obtain all required permits before starting work in the delineated waters/wetland areas.

This letter contains an approved jurisdictional determination for your subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the North Atlantic Division Office at the following address:

ATTN: Mr. James Haggerty, Regulatory Program Manager United States Army Corps of Engineers CENAD-PD-OR Fort Hamilton Military Community 301 General Lee Avenue Brooklyn, NY 11252-6700 Email: james.w.haggerty@usace.army.mil

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by October 25, 2016. It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter.

This jurisdictional determination is valid for a period of five (5) years from the date of this letter unless new information warrants revision prior to the expiration date. If you have any questions, please contact Audrey Cotnoir either via telephone at 757-549-8819 or via email at audrey.l.cotnoir@usace.army.mil.

Sincerely,

Peter R. Kube

Chief, Eastern Virginia Regulatory Section

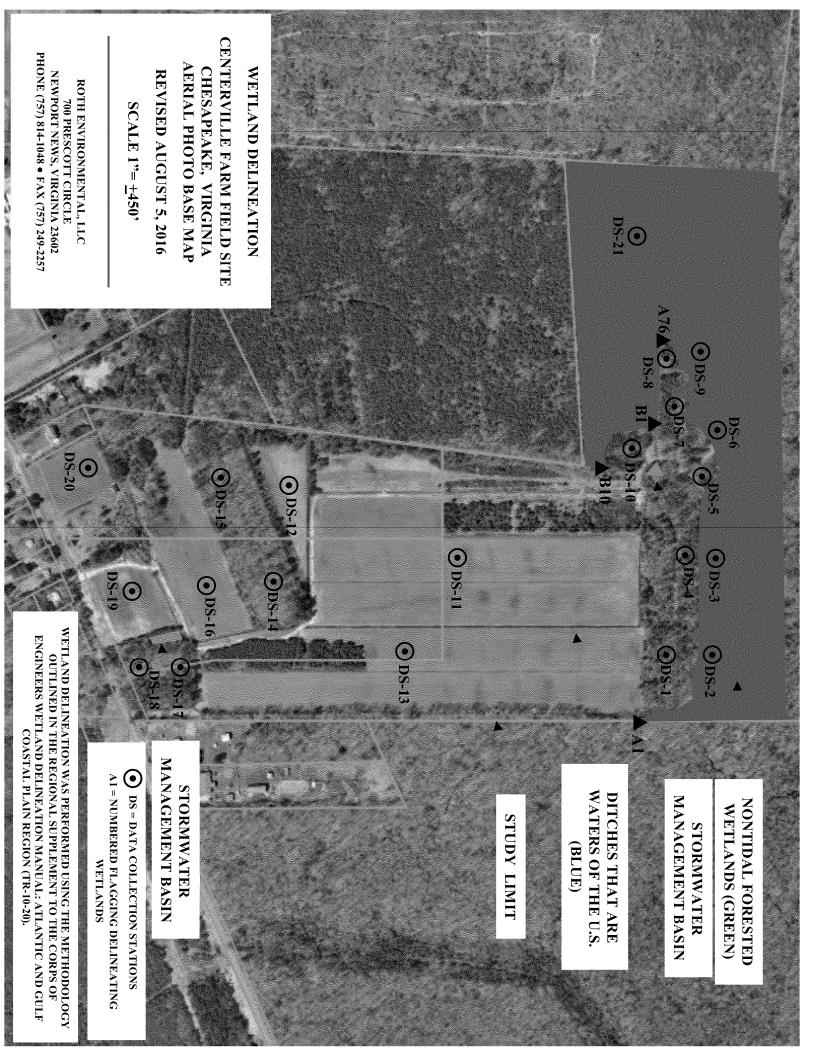
Enclosures:

Wetland/Waters Delineation Map; Administrative Appeal Form; Supplemental Preapplication Form

Cc:

Roth Environmental, LLC, ATTN: Matt Roth

Virginia Department of Environmental Quality, Virginia Beach, ATTN: Sheri Kattan



## NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Appli	cant: Tri-City Properties, LLC	File Number: NAO-2016-0712	Date: 8/26/2016
Attacl	ned is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Po	ermit or Letter of permission)	A
	В		
	PERMIT DENIAL		C
X	APPROVED JURISDICTIONAL DETERMIN	NATION	D
	PRELIMINARY JURISDICTIONAL DETER	MINATION	Е

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <a href="http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/appeals.aspx">http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/appeals.aspx</a> or Corps

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

regulations at 33 CFR Part 331.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

#### B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.
- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTION	ONS TO AN INITIAL PRO	FFERED PERMIT
REASONS FOR APPEAL OR OBJECTIONS: (Describ	e your reasons for appealing the d	ecision or your objections to an
initial proffered permit in clear concise statements. You may attac	h additional information to this fo	rm to clarify where your reasons
or objections are addressed in the administrative record.)		
ADDITIONAL INFORMATION: The appeal is limited to a review	w of the administrative record, the	Corps memorandum for the
record of the appeal conference or meeting, and any supplemental	information that the review officer	r has determined is needed to
clarify the administrative record. Neither the appellant nor the Con	rps may add new information or ar	nalyses to the record. However,
you may provide additional information to clarify the location of in		iministrative record.
POINT OF CONTACT FOR QUESTIONS OR INFOR		
If you have questions regarding this decision and/or the appeal process you may contact:	also contact:	ding the appeal process you may
U.S. Army Corps of Engineers, Norfolk District	Mr. James W. Haggerty	
ATTN: Audrey Cotnoir (CENAO-WR-R)	Regulatory Program Manager (CEN	AD-PD-OR)
Great Bridge Reservation	U.S. Army Corps of Engineers	,
2509 Reservation Road	Fort Hamilton Military Community	
Chesapeake, Virginia 23322-5217	301 General Lee Avenue Brooklyn, New York 11252-6700	
(757) 549-8819	Telephone number: 347-370-4650	
Email: Audrey.l.cotnoir@usace.army.mil		
RIGHT OF ENTRY: Your signature below grants the right of entr	ry to Corps of Engineers personne	l, and any government
consultants, to conduct investigations of the project site during the	course of the appeal process. You	ı will be provided a 15 day
notice of any site investigation, and will have the opportunity to pa		TP 1 1 1
	Date:	Telephone number:
C:		
Signature of appellant or agent.	[	



# DEPARTMENT OF THE ARMY US ARMY CORPS OF ENGINEERS NORFOLK DISTRICT FORT NORFOLK 803 FRONT STREET NORFOLK VA 23510-1096

AUGUST 26, 2016

#### **Supplemental Preapplication Information**

Project Number: NAO-2016-0712 Applicant: Tri-City Properties, LLC

Project Location: 110-acre area of three parcels located 0.9 miles east-northeast of the intersection of Elbow Road and Centerville Turnpike in Chesapeake, Virginia. The subject site includes tax map parcels 0390000000381, 0390000000382, and a limited

portion of 0390000000380.

POI	tion	01 0390000000360.
1.	Αs	earch of the Virginia Department of Historic Resources data revealed the following:
		No known historic properties are located on the property.
	$\boxtimes$	The following known architectural resources are located on the property: 131-5335 (Unmarked Cemetery)- VDHR determined Not Eligible in 2005 131-0301 (Former house at 2004 Elbow Road)- Demolished
	$\boxtimes$	The following known archaeological resources are located on the property: 44CS0270 (Farmstead)- VDHR determined Not Eligible in 2005 44CS0274 (Trash scatter, 1875-1899; 1900-1924)- VDHR has not evaluated for National Register eligibility)
		The following known historic resources are located in the vicinity of the property (potential for effects to these resources from future development):
NO	TE: 1) 2)	The information above is for planning purposes only. In most cases, the property has not been surveyed for historic resources. Undiscovered historic resources may be located on the subject property or adjacent properties and this supplemental information is not intended to satisfy the Corps' requirements under Section 106 of the National Historic Preservation Act (NHPA).  Prospective permittees should be aware that Section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant.
2.	Co	earch of the data supplied by the U.S. Fish & Wildlife Service, the Virginia Department of nservation and Recreation and the Virginia Department of Game and Inland Fisheries ealed the following:
		No known populations of threatened or endangered species are located on or within the vicinity of the subject property.
	$\boxtimes$	The following federally-listed species may occur within the vicinity of the subject property:  Northern Long-eared Bat ( <i>Myotis septentrionalis</i> )

☐ The following state-listed	(or other) species	s may occu	r within the	vicinity	of the	subject
property:				-		_

Please note this information is being provided to you based on the preliminary data you submitted to the Corps relative to project boundaries and project plans. Consequently, these findings and recommendations are subject to change if the project scope changes or new information becomes available and the accuracy of the data.



June 16, 2016

Audrey Cotnoir U.S. Army Corps of Engineers Regulatory Branch 803 Front Street Norfolk, VA 23510

RE:

Centerville - Farm Fields

Revised Letter Project No. 06-006

USACE Project No. NAO-2006-5097

#### Dear Ms. Cotnoir:

On behalf of our client, Tri-City Properties, LLC (Attn.: Michael Gelardi, 3333 Virginia Beach Boulevard, Suite 24, Virginia Beach, Virginia 23452) Roth Environmental, LLC is requesting confirmation of the wetland delineation within the study area identified on the referenced project. The farm field site is specifically located 0.9-miles east-northeast of the intersection of Elbow Road and Centerville Turnpike. The study area is approximately 110-acres.

The Centerville Farm Field Site is a mixture of actively farmed fields and woodlands. The farmed areas account for approximately 45-acres. The remaining property contains a 2-acre maintained yard (the location of the former farm house) and 63-acres of woodlands.

In general, the farmed fields on the property are ditched with primary ditches (deepest), feeder ditches (shallower ditches that flow into the primary ditches), and lateral swales in the fields (these feed into the feeder ditches). The forested areas within the study area were all historically logged. The areas immediately north and northwest of the farm fields were timbered in the early 1990s. These areas have younger forests than the surrounding wooded areas. They are also typified by having numerous mounded areas throughout them. These mounded portions of the site are depicted in red on the LIDAR map.

Prior to field investigations, research on the site was performed using aerial photographs, USGS Topographic Maps, GIS mapping, the NRCS Soils survey, and the previously confirmed wetland delineation. The NRCS maps two soil types on the property. The southern half of the property is mapped as Acredale soils. These soils are listed as poorly drained by the NRCS when no ditching or other modifications have been made.

The northern half of the study area is mapped as Gertie soils. Gertie soils are also listed as poorly drained when no ditching has been performed.

At the highest elevations, the "non filled" portions of the property are approximately 12-14 feet above mean sea level. This is found on the northern portion of the study area. As the property falls to the north and south, it drops in elevation to approximately 10 feet above mean sea level. Drainage off the property is through a series of shallow and deep ditches that flow to the north and south.

The site also contains several areas that contain fill/soil piles that were historically shaped to provide drainage and allowed to revegetate. Young saplings have vegetated these areas. Examples of these areas are in the southeastern and northwestern edges of the field areas. Elevations in these areas are ten to fifteen feet above the surrounding grades.

Roth Environmental, LLC has performed a wetland delineation on the study area. Fieldwork for the wetland delineation was performed using the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (TR-10-20). This manual uses three parameters (vegetation, soils, and hydrology) in determining and delineating wetlands. Wetlands are denoted in the field with numbered orange and white flagging.

During the wetland delineation field efforts, we incorporated the flagging that we hung during our April 2016 meeting/site visit. These flags provided a good baseline for the areas that we had agreed represented the wetland/upland limit. The newly flagging wetland limit tied right into these flags.

The most significant ditching on the site is in the southern two-thirds of the study area. This includes the deeper ditches associated with the farmed fields. The forested upland areas are predominantly associated with the deeper ditches along the northern edges of the farmed areas. These areas tend to have sandier soils than the neighboring wetland areas and have a much greater ability to shed stormwater through the ditches.

Additionally, we incorporated some of the mounded areas into the uplands. The areas that we included as uplands were found along the upland/wetland limit that we had walked in April 2016. Other mounded areas found farther to the interior (or north) of the shown wetland limit, were not flagged, as they were somewhat far from the contiguous upland areas. Should the applicant wish to explore these areas in greater detail, we can address them in an expanded delineation of these areas at a later date.

The nontidal forested wetland areas meet all three parameters for wetlands as outlined in the Regional Supplement. They contain a vegetative element that tends to include dominant species that are facultative and wetter. The soils throughout the study area are hydric. Typical indicators of hydrology that were observed included water stained leaves, the FAC-Neutral Test, and geomorphic position.

As discussed above, the forested uplands are found in the areas most deeply ditched and contiguous to the farmed fields. These areas have a shift to include facultative upland species as constituents in their dominant vegetation components. While the soils in these upland areas are hydric, there are significant hydrologic modifications throughout them in the form of the ditches. Therefore, we did not observe indicators of hydrology in these areas.

The farmed fields were reviewed in the field and also through aerial photographs to view historic conditions. Roth Environmental compared aerials from GoogleEarth to the rainfall data that you provided. A summary is provided below.

Aerial Photograph Review Accounting for Rainfall Conditions - Centerville Farm Fields

Photograph Date	Conditions Observed in the Fields on the Aerial	Antecedent Conditions and Rainfall the Month of the
	Photograph	Photograph
11/2015	Fields show no signatures of	Rainfall above average for
	saturation or inundation.	September and November in 2015.
		3-month antecedent conditions at
		high end of normal as October was
		on the lowest end of normal.
4/2014	Some scattered light signatures	April precipitation above average.
	of saturation on the aerial	The 3-month antecedent conditions
	photograph. No inundation	were normal.
	observed.	
1/2011	Scattered light signatures of	The 3-month antecedent is on the
	saturation in the fields. No	low end of normal. January is within
	inundation observed.	the normal range.
4/2010	Few scattered light signatures	The 3-month antecedent is above
	of saturation in the fields. No	normal. April was below normal.
	inundation observed.	

In comparing the aerial photographs with the rainfall data, several observations were made. First, there was no inundation in the fields observed in any of the photographs. Second, only light signatures of saturation were observed. The majority of these signatures appear to be in the areas of the swales in the fields. These areas are likely collecting the rainfall and allowing the water to funnel to the ditches.

The rainfall data predominantly shows, with the exception of 2011, there is either above normal precipitation in the 3 months prior to the aerial photograph or there is above normal precipitation the month of the photograph. This could likely be the reason that the fields show the light signatures of saturation in these photographs.

Based on our review, the farm fields have been effectively drained and are not wetland areas.

U.S. Army Corps of Engineers June 16, 2016 Page 4 of 4

I have added and attachment that discusses the Ditch Assessment for Waters of the U.S. This table and map depict the data that we gathered in April.

Based on our field calculations, the study area contains approximately 80 acres of uplands and 30 acres of nontidal forested wetlands. The study area also contains approximately 11,900 linear feet of Waters of the U.S. (ditches).

Included with this report are a wetland delineation drawing, a Waters of the U.S. Assessment Map, a vicinity map, data collection forms, the NRCS soils map, and the NWI map. At this time, we are requesting confirmation of the wetland delineation.

I look forward to our site visit to confirm this delineation. Please let me know if you have any questions or would like to discuss the information prior to this date.

Sincerely,

ROTH ENVIRONMENTAL, LLC

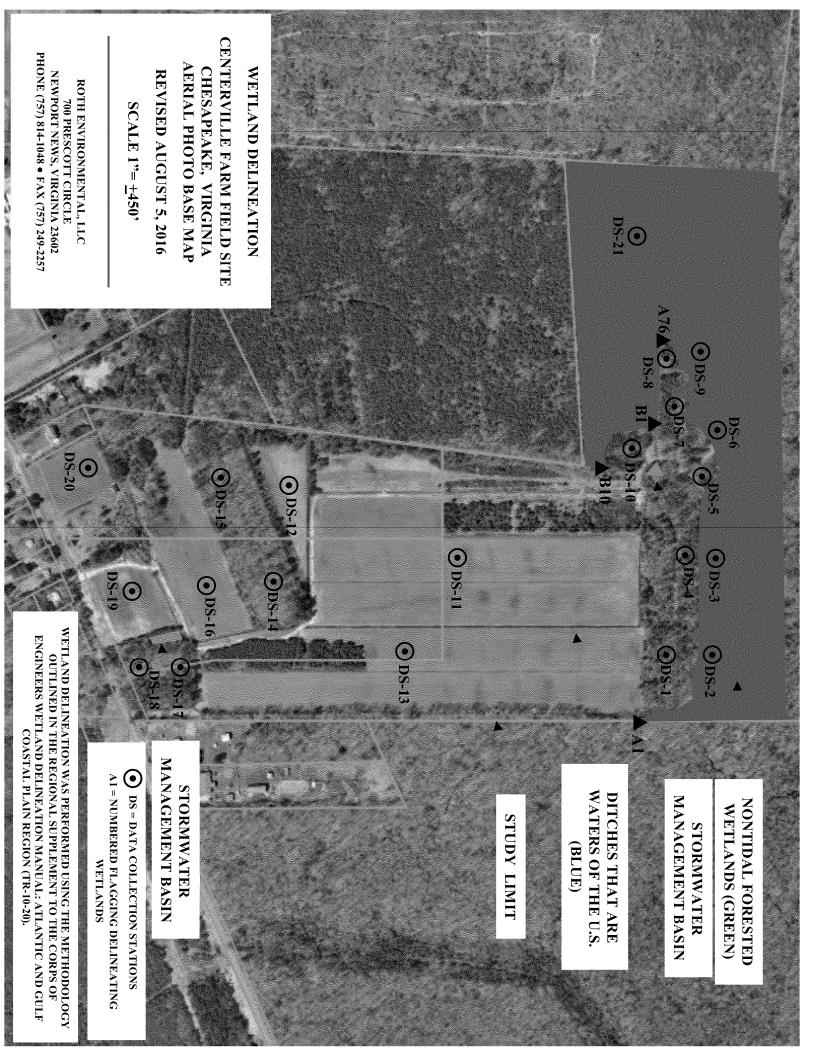
Matthew Roth, P.W.S.

President

**Enclosures** 

cc: Mike Gelardi

Macintosh HD:Users:Roth:Documents:Roth Environmental, LLC:Projects:2006:06-006.centerville:2016 Farm Field Area - Delineation:Submission Package:2016.07.07.Cotnoir.wetland delineation.Centerville Farm Fields.docx





# Centerville – Farm Field Site Ditch Assessment/Waters of the U.S. July 2016

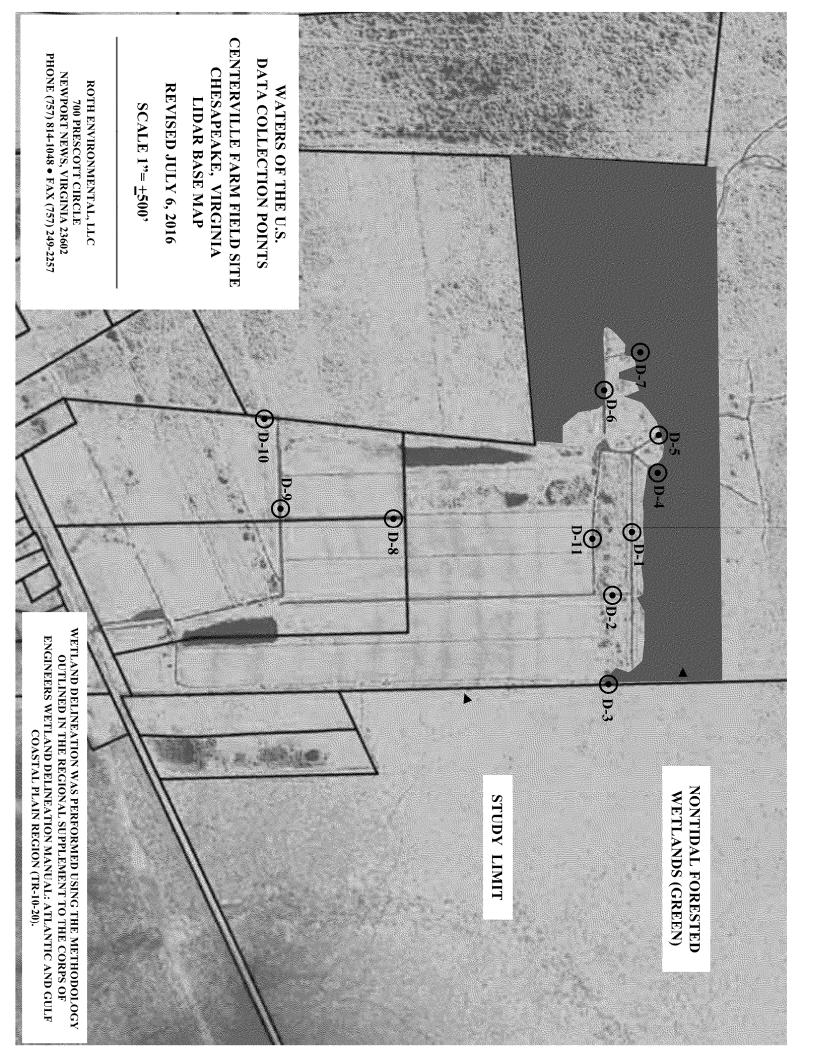
The following table summarizes the assessment of the ditches on the Centerville – Farm Field Site. Waters of the U.S. were identified using an Ordinary High Water Mark (OHWM). Roth Environmental worked with the U.S. Army Corps of Engineers in the collection of the data presented below. Field data was collected 4/21/16. The physical characteristics of OHWMs are listed below the table and correspond to the numbers given.

Ditch Assessment	OHWM Physical Characteristics	Water Present in Ditch
Station		
1	4, 5, 7, 13, 14	Yes
2	4, 5, 7, 13, 14	Yes
3	4, 5, 7, 13, 14	Yes
4	4, 5, 7, 13, 14	Yes
5	4, 5, 7, 13, 14	Yes
6	4, 5, 7, 13, 14	Yes
7	4, 5, 7, 13, 14	Yes
8	Not a Waters of the U.S.	No
9	4, 7, 13, 15	Yes
10	4, 5, 7, 13, 14	Yes
11	4, 5, 7, 13, 14	Yes

The following physical characteristics should be considered when making an OHWM determination, to the extent that they can be identified and are deemed reasonably reliable:

- 1. Natural line impressed on the bank
- 2. Shelving
- 3. Changes in the character of soil
- 4. Destruction of terrestrial vegetation
- 5. Presence of litter and debris
- 6. Wracking
- 7. Vegetation matted down, bent, or absent
- 8. Sediment sorting
- 9. Leaf litter disturbed or washed away
- 10. Scour
- 11. Deposition
- 12. Multiple observed flow events
- 13. Bed and banks
- 14. Water staining
- 15. Change in plant community

Macintosh HD:Users:Roth:Documents:Roth Environmental, LLC:Projects:2006:0606.centerville:2016 Farm Field Area - Delineation:Submission Package:2016.07.07.Ditch Assessment for WOUS.revised.docx



#### WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Centervill	e-Form Te	Id Avea city/	County:	ge sa pec	ke	Sampling D	Date: 05/10/10
Applicant/Owner: Tri-CH					tate: VA		
Investigator(s): Roth		•	on, Township				
Landform (hillslope, terrace, etc.	Form Fie	. /			one): <u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>	e.	Slope (%): 0-2
Subregion (LRR or MLRA):	POT	2/2°41	142"		6°10'00"		
Subregion (LRR or MLRA):	<u> </u>	_ Lat. <u>Old 7-7-</u>		cong: <u>-r</u>	_	. 14	Datum:
Soil Map Unit Name: ACM	<b>-</b>				NWI classific		<u></u>
Are climatic / hydrologic conditio							
Are Vegetation, Soil							
Are Vegetation, Soil	, or Hydrology	naturally problem	atic? No (	if needed, ex	oplain any answe	rs in Remari	<b>(S.)</b>
SUMMARY OF FINDING	5 - Attach site m	ap showing sar	npiing poi	nt location	ns, transects	, importa	nt features, etc.
Hydrophytic Vegetation Preser Hydric Soil Present? Wetland Hydrology Present?	Yes	<del>-</del> ····	Is the Sam within a We	•	Yes	No	_
Many Lateral	ditches and	heldsue	Qes dra	يم للم	o Field.		
HYDROLOGY							
Wetland Hydrology Indicator	<b>s</b> :				Secondary Indica	itors (minimi	ım of two required)
Primary Indicators (minimum o	f one is required; check	( all that apply)		<del></del> .	Surface Soil	Cracks (B6)	
Surface Water (A1)		uatic Fauna (B13)		_		_	cave Surface (B8)
High Water Table (A2)	<del></del>	d Deposits (B15) (LR		-	Drainage Pa		
Saturation (A3)		irogen Sulfide Odor (	•		Moss Trim L		
Water Marks (B1)	<del></del>	dized Rhizospheres		loots (C3)	Dry-Season		(C2)
Sediment Deposits (B2) Drift Deposits (B3)	_	sence of Reduced In		-	Crayfish Bur		:-1 (
Algai Mat or Crust (B4)	<del></del>	cent Iron Reduction in n Muck Surface (C7)	-	CO) _	Saturation v Geomorphic		ial Imagery (C9)
Iron Deposits (B5)	<del>-</del>	er (Explain in Remar		-	Shallow Aqu	-	-'
Inundation Visible on Aeria	<del></del>		,	•	FAC-Neutral		
Water-Stained Leaves (B9				•	Sphagnum r		RR T, U)
Field Observations:	······································			······································			
Surface Water Present?	Yes No	Depth (inches):					
Water Table Present?	Yes No	Depth (inches):	3				
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):			ydrology Presei	nt? Yes	No
Describe Recorded Data (stream	am gauge, monitoring w	vell, aerial photos, pro	evious inspec	tions), if avail	able:		
Remarks:				-			
							ł
							İ
1							i

VEGETATION (Five Strata) - Use scientific nan	nes of pla	ants.		Sampling Point: <u>DS11</u>
Tree Stratum (Plot size: 30' )		Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC:  (A)
2				Total Number of Dominant
3				Species Across All Strata:/ (B)
4				B
5				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6				
		= Total Cov		Prevalence Index worksheet:
50% of total cover:	20% of	total cover:		Total % Cover of:Multiply by:
Sapling Stratum (Plot size: 30')				OBL species x 1 =
1.				FACW species x 2 =
2			<del></del>	FACUL energies x 3 =
3				FACU species x 4 =
4				UPL species x 5 =
5				Column Totals: (A) (B)
6				Prevalence Index = B/A =
_		≕ Total Cov		Hydrophytic Vegetation Indicators:
50% of total cover:	20% of	total cover:		1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30'				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.01
2				Problematic Hydrophytic Vegetation¹ (Explain)
3				
4				Indicators of hydric soil and wetland hydrology must
5				be present, unless disturbed or problematic.
6				Definitions of Five Vegetation Strata:
		= Total Cov		Tree - Woody plants, excluding woody vines,
50% of total cover:	20% of	total cover.	<u>رج</u> :	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Herb Stretum (Plot size: 30'	^	V		
1. Allium canadense			-	Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
2.				than 3 in. (7.6 cm) DBH.
3				Should Mandy starts and discount visco
4				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
5				
6				Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
7				plants, except woody vines, less than approximately
8				3 ft (1 m) in height.
10.	<del> </del>			Woody vine - All woody vines, regardless of height.
11				
	$\overline{2}$	= Total Cov		
50% of total cover:		total cover		
Woody Vine Stratum (Plot size: 30' )	_ 207001	10101 00701	· <u> </u>	
1				
2.				
3.				
4.				
5				Hydrophytic
	0	= Total Cov	rer	Vegetation
50% of total cover:		total cover	_	Present? Yes No
Remarks: (If observed, list morphological adaptations belo	w).			1

Color (moist)	Color (moist)	Depth	ription: (Describe ) Matrix	·		x Features				•	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  1	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.    Application: (Applicable to all LRRs, unless otherwise noted.)   Indicators for Problematic Hydric Soils*: (Aft)   Polyvalue Below Surface (S8) (LRR S, T, U)   1 cm Muck (A9) (LRR Q)   2 cm Muck (A10) (LRR Q)   2 cm Muck (A			%			Type¹ Lo	c <sup>2</sup> Texture		Remarks	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  1	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.    Variable   Variabl	0-12	104R.311	100				Sandi	1 loar	<u> </u>	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  1	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.    Variable   Variabl	12-24	10YR 5/1	95	104R 514	5_		_sond	ا دامیا	loam	
ydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)	ydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)								C	<b>( - ( ) </b>	
lindicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)	lindicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)										
Histosol (A1)	Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR S)  Black Histic (A3) Loamy Mucky Mineral (F1) (LRR P, T, U) Pepleted Dark Surface (F1) (MLRA 151)  Thick Dark Surface (A16) (MLRA 150A)  Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Redox (S5) Piedmont Floodplain Soils (F19) (LRR O, P)  Stratified Layers (A5) Depleted Dark Surface (F1) (MLRA 151)  Thick Dark Surface (A16) (MLRA 150A) Depleted Ochric (F17) (MLRA 151)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Redox (S5) Piedmont Floodplain Soils (F19) (LRR O, P)  Predmont Floodplain Soils (F19) (LRR P, T)  Depleted Dark Surface (F6) (MLRA 153B)  (MLRA 153B) (MLRA 153B)  Wery Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Other (Explain in Remarks)  John Mark (F10) (LRR O, P, T)  Depleted Dehric (F11) (MLRA 151)  Thick Dark Surface (A16) (MLRA 150A) Umbric Surface (F17) (MLRA 151)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A)  Restrictive Layer (If observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No						<del></del>				
Histosol (A1)	Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR S)  Black Histic (A3) Loamy Mucky Mineral (F1) (LRR P, T, U) Pepleted Dark Surface (F1) (MLRA 151)  Thick Dark Surface (A16) (MLRA 150A)  Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Redox (S5) Piedmont Floodplain Soils (F19) (LRR O, P)  Stratified Layers (A5) Depleted Dark Surface (F1) (MLRA 151)  Thick Dark Surface (A16) (MLRA 150A) Depleted Ochric (F17) (MLRA 151)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Redox (S5) Piedmont Floodplain Soils (F19) (LRR O, P)  Predmont Floodplain Soils (F19) (LRR P, T)  Depleted Dark Surface (F6) (MLRA 153B)  (MLRA 153B) (MLRA 153B)  Wery Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Other (Explain in Remarks)  John Mark (F10) (LRR O, P, T)  Depleted Dehric (F11) (MLRA 151)  Thick Dark Surface (A16) (MLRA 150A) Umbric Surface (F17) (MLRA 151)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A)  Restrictive Layer (If observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No	<del></del>									
lindicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)	lindicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)										
lindicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)	lindicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)										
Histosol (A1)	Histosol (A1)										
Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Crganic Bodies (A6) (LRR P, T, U)  Muck Presence (A6) (LRR U)  Depleted Dark Surface (F6)  1 cm Muck (A9) (LRR P, T)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Croast Prairie Redox (A16) (MLRA 150A)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S6)  Dark Surface (S7) (LRR P, T, U)  Depleted Dark Surface (F1) (MLRA 151)  Iron-Manganese Masses (F12) (LRR O, P, T)  Sandy Redox (S5)  Sandy Redox (S5)  Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (If observed):  Type:  Thin Dark Surface (S9) (LRR S, T, U)  Loamy Mucky Mineral (F1) (LRR O)  Reduced Vertic (F18) (outside MLRA 150  Reduced Vertic (F18) (outside MLRA 150  Reduced Vertic (F10) (LRR O)  Reduced Vertic (F10) (LRR O)  Reduced Vertic (F10) (MLRA 150A)  Reduced Vertic (F10) (MLRA 150A)  Reduced Vertic (F10) (MLRA 149A)  Restrictive Layer (If observed):  Type:	Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Suifide (A4)  Stratified Layers (A5)  Corganic Bodies (A6) (LRR P, T, U)  Muck Presence (A8) (LRR U)  Depleted Dark Surface (F7)  Muck (A8) (LRR P, T)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Thin Dark Surface (F13) (LRR P, T, U)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A16)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Redox (S5)  Dark Surface (S9) (LRR S, T, U)  Piedmont Floodplain Soils (F19) (LRR P, T)  Depleted Dark Surface (F7)  Red Parent Material (TF2)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Depleted Dehric (F11) (MLRA 151)  Iron-Manganese Masses (F12) (LRR O, P, T)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Delta Ochric (F17) (MLRA 150A)  Stripped Matrix (S6)  Derk Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):  Depth (inches):  Hydric Soil Present? Yes No	-		able to all	•		-			•	Solls":
Black Histic (A3)	Black Histic (A3)									-	
Hydrogen Suifide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F19) (LRR P, Depleted Matrix (F3) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20)  Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR U) I cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Detta Ochric (F18) (MLRA 150A, 150B) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (If observed): Type:  —— Piedmont Floodplain Soils (F19) (LRR P, Anomalous Bright Loamy Soils (F20)  Matrix (F2) Anomalous Bright Loamy Soils (F20)  (MLRA 153B) Red Parent Material (TF2)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Sandy Mucky Mineral (S1) (LRR O, S) Piedmont Floodplain Soils (F19) (MLRA 150A, 150B)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Restrictive Layer (If observed):  Type:  ——  Piedmont Floodplain Soils (F20)  Matrix (F3)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	Hydrogen Sulfide (A4)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A6)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A6)  Organic Bodies (A6) (LRR P, T, U)  Depleted Dark Surface (F6)  Red Parent Material (TF2)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Iron-Manganese Masses (F12) (LRR O, P, T)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Redox (A16) (MLRA 150A)  Organic Bodies (A6)  Umbric Surface (F7)  Red Parent Material (TF2)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Iron-Manganese Masses (F12) (LRR O, P, T)  Wetland hydrology must be present, unless disturbed or problematic.  Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (If observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No		•								41 PA 45NA 1
Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A6) (LRR P, T, U)  Depleted Matrix (F3)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A6) (LRR P, T, U)  Depleted Dark Surface (F6)  Muck Presence (A8) (LRR P, T, U)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Sandy Redox (S5)  Delta Ochric (F17) (MLRA 150A, 150B)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (If observed):  Type:  Type:	Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A5)  Redox Depressions (F6)  Ned Parent Material (TF2)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Other (Explain in Remarks)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No		` '						-		•
5 cm Mucky Mineral (A7) (LRR P, T, U)  — Muck Presence (A8) (LRR U) — 1 cm Muck (A9) (LRR P, T) — Depleted Below Dark Surface (A11) — Thick Dark Surface (A12) — Coast Prairie Redox (A16) (MLRA 150A) — Sandy Mucky Mineral (S1) (LRR O, S) — Sandy Gleyed Matrix (S4) — Sandy Redox (S5) — Stripped Matrix (S6) — Dark Surface (S7) (LRR P, S, T, U)  Redox Depressions (F8) — Very Shallow Dark Surface (TF12) — Very Shallow Dark Surface (TF12) — Other (Explain in Remarks) — Iron-Manganese Masses (F12) (LRR O, P, T) — Wetland hydrology must be present. — unless disturbed or problematic. — unless disturbed or problematic. — Sandy Redox (S5) — Piedmont Floodplain Soils (F19) (MLRA 149A) — Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Restrictive Layer (If observed):  Type: ————————————————————————————————————	5 cm Mucky Mineral (A7) (LRR P, T, U)  Depleted Dark Surface (F7)  Muck Presence (A8) (LRR U)  1 cm Muck (A9) (LRR P, T)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Dark Surface (S7) (LRR P, S, T, U)  Redox Depressions (F8)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Other (Explain in Remarks)  Other (Explain in Remarks)  Iron-Manganese Masses (F12) (LRR O, P, T)  Wetland hydrology must be present, unless disturbed or problematic.  Reduced Vertic (F18) (MLRA 1514)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (If observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No						•				
Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12)  1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks)  Depleted Below Dark Surface (A11) Iron-Manganese Masses (F12) (LRR O, P, T)  Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) wetland hydrology must be present.  Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) unless disturbed or problematic.  Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Restrictive Layer (If observed):  Type:	Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12)  1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks)  Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)  Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Indicators of hydrophytic vegetation and wetland hydrology must be present.  Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) unless disturbed or problematic.  Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B)  Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Restrictive Layer (If observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No	Organic	Bodies (A6) (LRR P,	, T, U)	Redox Dark	Surface (F6)		(MLF	RA 153B)		
1 cm Muck (A9) (LRR P, T)	1 cm Muck (A9) (LRR P, T)					-	7)				
Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (If observed):  Type:	Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Derk Surface (S7) (LRR P, S, T, U)  Restrictive Layer (If observed):  Type:  Depleted Ochric (F11) (MLRA 151)  Iron-Manganese Masses (F12) (LRR O, P, T)  Iron-Manganese Masses (F12) (LRR P, T, U)  Wetland hydrology must be present,  unless disturbed or problematic.  Reduced Vertic (F18) (MLRA 151A)  Fiedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Learny Soils (F20) (MLRA 149A, 153C, 153D)  Restrictive Layer (If observed):  Type:  Depth (inches):  Hydric Soil Present? Yes No	_		)							2)
Thick Dark Surface (A12)	Thick Dark Surface (A12)			e (Δ11)		•	II PA 151)	Other (	Explain in I	Remarks)	
Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) wetland hydrology must be present, unless disturbed or problematic.  Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) unless disturbed or problematic.  Reduced Vertic (F18) (MLRA 150A, 150B)  Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (If observed):  Type:	Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) wetland hydrology must be present, unless disturbed or problematic.  Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) unless disturbed or problematic.  Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B)  Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Park Surface (S7) (LRR P, S, T, U)  Restrictive Layer (If observed):  Type:			((())			-	O. P. T) <sup>3</sup> indic	ators of hyd	trophytic vegel	ation and
Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Derk Surface (S7) (LRR P, S, T, U)  Restrictive Layer (If observed):  Type:	Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) unless disturbed or problematic.  Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B)  Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Pestrictive Layer (If observed):  Type:  Depth (inches): Hydric Soil Present? Yes No			ALRA 150							
Sandy Redox (S5) — Piedmont Floodplain Soils (F19) (MLRA 149A)  Stripped Matrix (S6) — Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (If observed):  Type:	Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Depth (inches): Hydric Soil Present? Yes No				Delta Ochric	(F17) (MLR	A 151)		ess disturbe	d or problema	tic.
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)  Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (If observed):  Type:	Stripped Matrix (S6) Anomalous Bright Loamy Solis (F20) (MLRA 149A, 153C, 153D)  Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type: Depth (inches): Hydric Soli Present? Yes No		• • •								
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:	Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches): Hydric Soil Present? Yes No					•		•	452D\		
Restrictive Layer (if observed):  Type:	Restrictive Layer (if observed):  Type:  Depth (inches): Hydric Soil Present? Yes No			T 10	Anomaious i	sngni Loamy	3015 (F20) (	(BILKA 149A, 153C)	, וטגנו		
Туре:	Type:										
· ·	Depth (inches): No		,								
Depth (inches): Hydric Soil Present? Yes V No			ches):		<del></del>			Hydric Soil	Present?	Yas V	No
	isomonis.						11.1.1.1	1.70.10 00.1			

#### WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Centervil	le-Farm Fie	Id Area cityl	County: Ch	<b>ല</b> ശ ഘദ	Ke	Samolino Da	ate: 05/10/10
Applicant/Owner: Tri-Ci				E	State: VA		
Investigator(s): Both	145 170/2011					заніршіў г	"" <u>12318</u>
	Taure 5	4	on, Township,				
Landform (hillslope, terrace, etc.	:): Farm Fie	Local	l relief (concav	re, convex. r	none): <u>Non</u>	<u> </u>	Slope (%): <u>0-2</u>
Subregion (LRR or MLRA):		Lat: 36° 44	42	_ Long: 🗔	H6°10'00'		Datum:
Soil Map Unit Name:	redale				NWI classific	ation: <u>UF</u>	<u> </u>
Are climatic / hydrologic conditi	ons on the site typical fo	r this time of year?	res N	io (I	lf no, explain in R	emarks.)	
Are Vegetation, Soil	, or Hydrology	significantly distu	rbed?/\D A	tre "Normai	Circumstances" p	resent? Yes	. No
Are Vegetation, Soil	, or Hydrology	naturally problem	atic? NO (1	If needed, e:	xplain any answe	rs in Remarks	s.)
SUMMARY OF FINDING	S - Attach site m	ap showing san	npling poir	nt locatio	ns, transects	, importan	it features, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present? Remarks:	Yes	No V	Is the Samp within a We		Yes	No	_
This field is	surranded	by deep	ditche	ы.			
	<u>,, _ , </u>						
HYDROLOGY							
Wetland Hydrology Indicato					Secondary Indica	tors (minimu	m of two required)
Primary Indicators (minimum	of one is required; check	( all that apply)	<del></del>		Surface Soil	Cracks (B6)	
Surface Water (A1)		ıatic Fauna (B13)			Sparsely Veg	_	ave Surface (B8)
High Water Table (A2)		n Deposits (B15) (LR		,	Drainage Pat	• •	
Saturation (A3)	<del>-</del> •	irogen Sulfide Odor (	•		Moss Trim Li		
Water Marks (B1)	<del></del>	dized Rhizospheres a	•	oots (C3)	Dry-Season \		(C2)
Sediment Deposits (B2) Drift Deposits (B3)		sence of Reduced Iro cent Iron Reduction in	- •	CE)	Crayfish Burn	• •	al Imagani (CO)
Algal Mat or Crust (B4)	<del></del>	n Muck Surface (C7)	i i inoc sons (c		Geomorphic		al imagery (C9)
!ron Deposits (B5)	<del></del>	er (Explain in Remar	ks)	•	Shallow Aqui		
Inundation Visible on Aer			,	•	FAC-Neutral		
Water-Stained Leaves (B				•	Sphagnum m		RT, U)
Field Observations:		·					
Surface Water Present?	Yes No	Depth (inches):					
Water Table Present?	Yes No	Depth (inches):					
Saturation Present?	Yes No/_	Depth (inches):		Wetland H	ydrology Presen	t? Yes	No_ <u>-</u>
(includes capillary fringe)  Describe Recorded Data (stre	am gauge, monitoring w	vell, aerial photos, pre	evious inspecti	ions), if avai	lable:		
Remarks:				<del></del>		·	
romano.							
							Ì
,							
1							

(ree Stratum (Plot size: 30' )		Dominant Species?		Dominance Test worksheet:  Number of Dominant Species
				That Are OBL, FACW, or FAC: (A)
				Total Number of Dominant Species Across All Strata: (B)
-				Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A)
•				That Are OBL, FACW, or FAC: 50 (A/
	<u> </u>	= Total Cov	er	Prevalence Index worksheet:
50% of total cover:	20% of	total cover:	0	Total % Cover of: Multiply by:
apling Stratum (Plot size: 30'				OBL species x 1 =
				FACW species x 2 =
				FAC species x 3 =
				FACU species x 4 =
				UPL species x 5 =
				Column Totals: (A) (E
				Prevalence Index = B/A =
	_0	= Total Cov	er	Hydrophytic Vegetation Indicators:
50% of total cover:	20% of	total cover.		1 - Rapid Test for Hydrophytic Vegetation
hrub Stratum (Plot size: 30')				2 - Dominance Test is >50%
•				3 - Prevalence Index is ≤3.01
				Problematic Hydrophytic Vegetation (Explain)
•				
•				Indicators of hydric soil and wetland hydrology must
•				be present, unless disturbed or problematic.
				Definitions of Five Vegetation Strata:
	_0_	= Total Cov	er	Too Meady plants evaluating woody in a
50% of total cover:	20% of	total cover:	0	Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
lerb Stratum (Plot size: 30'				(7.6 cm) or larger in diameter at breast height (DBH).
Triticum aestivum	30	<u> </u>	UPL	Sapling - Woody plants, excluding woody vines,
Ranunculus bulbosus	.30	$\overline{\mathbf{Y}}$	FAC	approximately 20 ft (6 m) or more in height and less
Album canadense	10	N	FACU	than 3 in. (7.6 cm) DBH.
Solonum carolinence		$\overline{N}$	FXLU	Shrub - Woody plants, excluding woody vines,
Vicia sativa		<u>N</u>	FACH	approximately 3 to 20 ft (1 to 6 m) in height.
· <del></del>				Herb - All herbaceous (non-woody) plants, including
•				herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
•				3 ft (1 m) in height.
				Woody vine - All woody vines, regardless of height.
0				Troots with - 7th woody villes, regulaces of height.
1,				
.1		= Total Cov		
50% of total cover: 4	<u>2</u> 20% of	total cover:	10	
Voody Vine Stratum (Plot size: 30')				
•				
· <del></del>				
· <u></u>				
				Hydrophytic
	0	= Total Cov	er	Vegetation
50% of total cover:		total cover	$\sim$	Present? Yes No V
Remarks: (If observed, list morphological adaptations belo				<u> </u>

Sampling Point: DS12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth Matrix Redox Feature	s						
(inches) Color (maist) % Color (maist) %	Type Loc Texture Remarks						
10-5 104R4/2 100	Clay lon						
5-16 10/R4/1 95 10/R5/6 5	clay loam						
Significant Stranger							
	·						
<u> </u>							
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Maske							
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise not	· · ·						
<del></del>	ce (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O)						
Histic Epipedon (A2) Thin Dark Surface (S9	· · · · · · · · · · · · · · · · · · ·						
Black Histic (A3) Loamy Mucky Mineral	· · · · · · · · · · · · · · · · · · ·						
Hydrogen Sulfide (A4)  Stretified Levers (A5)  Position Metrix (F3)	(F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Anomalous Bright Loamy Soils (F20)						
Stratified Layers (A5)							
5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface	• •						
Surrange (AB) (LRR U) Redox Depressions (F	• •						
1 cm Muck (A9) (LRR P, T) Mari (F10) (LRR U)	Other (Explain in Remarks)						
Depleted Below Dark Surface (A11) Depleted Ochric (F11)	(MLRA 151)						
Thick Dark Surface (A12) tron-Manganese Mass	ses (F12) (LRR O, P, T) <sup>3</sup> Indicators of hydrophytic vegetation and						
Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13)	(LRR P, T, U) wetland hydrology must be present,						
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (M	•						
Sandy Gleyed Matrix (S4) Reduced Vertic (F18)	·						
1 <del>-</del>	Soils (F19) (MLRA 149A)						
<del>-</del>	my Soils (F20) (MLRA 149A, 153C, 153D)						
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed):							
Туре:	Hydric Soil Present? Yes No.						
Depth (inches):	Hydric Soil Present? Yes No						
Remarks:							
†							
1							
	•						

#### WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Centerville-Farm Field Area. City/County: C	hesapeake Sampling Date: 05/10/1			
Applicant/Owner: Tri-Cities Properties LLC	State: VA Sampling Point: DS 13			
Investigator(s): Roth Section, Townsh	ip, Range:			
	cave, convex, none): None Slope (%): 0-2			
Subregion (LRR or MLRA): LRRT Lat: 36°44′ 42″	-710111			
Subjection (LRR of WLRA). Lat. 310 44 Tot				
Soil Map Unit Name: Acredale	NWI classification: LIPL			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	No (If no. explain in Remarks.)			
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes No			
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sampling po	oint locations, transects, important features, etc.			
Hydric Soil Present? Yes V No I	mpied Area Netland? Yes No			
This Freld is contains many lateral ditches it.	and field swales that dean			
HYDROLOGY				
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)			
Primery Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)			
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2) Marl Deposits (B15) (LRR U)	Drainage Patterns (B10)			
Saturation (A3) Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)			
Water Marks (B1) Oxidized Rhizospheres along Living	Roots (C3) Dry-Season Water Table (C2)			
Sediment Deposits (B2) Presence of Reduced Iron (C4)	Crayfish Burrows (C8)			
Drift Deposits (B3) Recent Iron Reduction in Tilled Soils	• • •			
Algal Mat or Crust (B4) Thin Muck Surface (C7)	Geomorphic Position (D2)			
iron Deposits (B5) Other (Explain in Remarks)	Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)			
Water-Stained Leaves (B9) Field Observations:	Sphagnum moss (D8) (LRR T, U)			
Water Table Present?  Yes No Depth (inches):  Solvention Present?	The state of the s			
Saturation Present? Yes No/_ Depth (inches):	Wetland Hydrology Present? Yes No			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	ections), if available:			
Remarks:				
	1			
	ļ			

#### Sampling Point: DSI 3 VEGETATION (Five Strata) - Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: 30' ) % Cover Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: 1.\_\_ Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet: \_\_ = Total Cover Total % Cover of: Multiply by: 50% of total cover: \_\_\_\_O\_\_ 20% of total cover: \_\_\_\_O\_\_ OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_ Sapling Stratum (Plot size: 30' FACW species \_\_\_\_\_ x 2 = \_\_\_\_ FAC species \_\_\_\_\_ x 3 = \_\_\_\_ FACU species \_\_\_\_\_ x 4 = \_\_\_\_ UPL species \_\_\_\_\_ x 5 = \_\_\_\_ Column Totals: \_\_\_\_\_ (A) \_\_\_\_ (B) Prevalence index = B/A = \_\_\_\_ \_\_\_\_\_ = Total Cover Hydrophytic Vegetation Indicators: 50% of total cover: 20% of total cover: 2 \_\_ 1 - Rapid Test for Hydrophytic Vegetation Shrub Stratum (Plot size: 30' \_\_\_ 2 - Dominance Test is >50% \_\_ 3 - Prevalence Index is ≤3.01 2 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) 1 indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Five Vegetation Strata: \_\_\_\_ = Total Cover Tree - Woody plants, excluding woody vines, 50% of total cover: 20% of total cover: 0 approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Herb Stratum (Plot size: 30' 1. Ambrasia artomisiifolia Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. 6. Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 8. 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height. 40\_ = Total Cover 50% of total cover: \_\_\_\_\_\_\_\_\_ 20% of total cover: \_\_\_\_\_\_\_\_\_\_ Woody Vine Stratum (Plot size: 30') 1. \_\_ Hydrophytic C = Total Cover Vegetation Present? 50% of total cover: \_\_\_\_\_\_\_ 20% of total cover: \_\_\_\_\_\_\_\_\_

Remarks: (If observed, list morphological adaptations below).

Profile Desc	ription: (Describe t	o the dept	h needed to docum	nent the I	ndicator	or confirm	the absence	of indicate	ors.)	
Depth	Metrix	<del></del> -		x Feature:		Loc²	Touture		Remarks	
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u> %</u>	_Type¹	LOC	Texture		Remarks	
0-5	1048 4/2	100	14210				. 7	loan		
<u>5-16</u>	104R4/1	<u>45</u> .	104R5/16	_5_			<u>Clay</u>	loan		<del></del> .
								. —		
¹Tyne: C=C	oncentration, D=Depl	etion RM=	Reduced Matrix M	S=Masked	Sand Gr	eins.	<sup>2</sup> Location	: PL=Pore I	Lining, M≕Matri	X.
	indicators: (Applica								matic Hydric	
Histosol	(A1)		Polyvalue Be	low Surfa	ce (S8) (L	.RR S, T, U	l) 1 cm	Muck (A9) (	LRR O)	
Histic E	pipedon (A2)		Thin Dark Su					Muck (A10)	•	
1 —	istic (A3)		Loamy Muck	-		R (O)		•	F18) (outside li laia Saile (E10)	
1	en Sulfide (A4) d Layers (A5)		Loamy Gleye Depleted Ma		(FZ)		_		lain Soils (F19) t Loarny Soils (I	
ı —	Bodies (A6) (LRR P,	T, U)	Redox Dark		<del>-</del> 6)			.RA 153B)	t Bounty Gone (	,
1 —	ıcky Mineral (A7) (LR		Depleted Da	= -	-		Red I	Parent Mate	rial (TF2)	
	resence (A8) (LRR U	)	Redox Depre	-	8)				k Surface (TF1	2)
	ick (A9) (LRR P, T) d Below Dark Surface	- /4.44\	Mari (F10) (L Depleted Oc	•	/MIDA4	541	Other	(Explain in	Remarks)	
ı ——	ark Surface (A12)	(A11)	Iron-Mangari	•	•	•	T) <sup>3</sup> ind	icators of hy	drophytic vegel	ation and
I —	rairie Redox (A16) (N	ILRA 150A	_				•	-	logy must be pr	
	Mucky Mineral (S1) (L	.RR O, S)	Delta Ochric					less disturb	ed or problema	tic.
1	Sleyed Matrix (S4)		Reduced Ve							
	Redox (S5) I Matrix (S6)		Anomalous (					C, 153D)		
, —	rface (S7) (LRR P, S	, T, U)								
Restrictive	Layer (if observed):									
Туре:									-/	
Depth (in	ches):						Hydric So	II Present?	Yes	No
Remarks:										

#### WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Centerville - Farm Field Area. City/County:	Chesaneake sampling Date: 05/10/10
Applicant/Owner: Tri-Cities Properties, LLC	State: VA Sampling Point: DS14
Investigator(s): Roth Section, Towns	
- · · · · · · · · · · · · · ·	ncave, convex, none): None slope (%): 0 - 3
Subregion (LRR or MLRA): LRRT Lat: 36° 44′ 42"	· 0 · 2 · 2 · 2 · 1
A	······································
Soil Map Unit Name: Acredale	NWI classification: <u>UPL</u>
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	
Are Vegetation Soil or Hydrology significantly disturbed? N(	·
Are Vegetation, Soil, or Hydrology naturally problematic? NC	) (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling p	point locations, transects, important features, etc.
Hydric Soit Present? Yes 1/ No	ampled Area a Wetland? Yes No
This wooded area is surrounded by deep ditel	hes.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (86)
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Mart Deposits (B15) (LRR U)  Seturation (A3)  High water Table (A2)	Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Oxidized Rhizospheres along Livin	Moss Trim Lines (B18) ng Roots (C3) Dry-Season Water Table (C2)
Sediment Deposits (B2)  Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Drift Deposits (B3) Recent Iron Reduction in Tilled Soi	<del></del>
Algal Mat or Crust (B4) Thin Muck Surface (C7)	Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Remarks)	Shallow Aquitard (D3)
inundation Visible on Aerial Imagery (87)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	<del>-</del>
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp	pections), if available:
Remarks: Wooded area Surrounded by	5' ditches

		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30'		Species?	Status	Number of Dominant Species
1. Liquidambar Styraciflus.	40	À	FAC.	That Are OBL, FACW, or FAC: 8 (A)
2. Actr rubrum	30	<u> </u>	FAC.	,
		<u> </u>	<u>/ / / / / / / / / / / / / / / / / / / </u>	Total Number of Dominant
3. Pinus taeda.	10	<u>N</u>	EAC	Species Across All Strata: (B)
4. Prunus serotina	10		FACU	
4 FINIUS SEISTINGS		<del></del> .		Percent of Dominant Species
5. Liriodendron tulipifera.			<del>FACLI</del>	That Are OBL, FACW, or FAC: (A/B)
6.				(12)
V	0=			Prevalence Index worksheet:
	<u> 73</u>	= Total Cove	er	
50% of total cover: 47.4	20% of	f total cover:	19	Total % Cover of: Multiply by:
				OBL species x 1 =
Saoling Stratum (Plot size: 30' )		<b>\</b> /		FACW species x 2 =
1. Aver ruboum	_5_	<u> </u>	FAC_	
2 1 to aldomber strong fluo	- (5		EAS	FAC species x 3 =
1. Aver ruboum 2. Liquidambar Styraciflua.		<del></del>		FACU species x 4 =
3				
4				UPL species x 5 =
				Column Totals: (A) (B)
5				(-)
6				December of Index - D/A -
<u> </u>			<del></del>	Prevalence Index = B/A =
	40	= Total Cov	er	Hydrophytic Vegetation Indicators:
50% of total cover:5	20% o	f total cover:	~3	1 - Rapid Test for Hydrophytic Vegetation
				,
Shrub Stratum (Plot size: 30')				2 - Dominance Test is >50%
1. Pinus taeda	5	N	FAC	3 - Prevalence Index is ≤3.0'
			FAQU	1 <del></del>
2. Vaccinium corymbosum 3. Asimina triloba	<u></u>	<u> </u>		Problematic Hydrophytic Vegetation¹ (Explain)
3. Asimina triloba	15_		FAC	1
4. Quercus phellos	٦,	A.)	FAC.	3
	<del>-~</del>			Indicators of hydric soil and wetland hydrology must
5. Prunus Grotinas			FACU	be present, unless disturbed or problematic.
6.				Definitions of Five Vegetation Strata:
	20			3
		= Total Cov		Tree - Woody plants, excluding woody vines,
///			_ ,	
1 50% of total cover: 17	20% ი	f total covera	3.10	approximately 20 ft (6 m) or more in height and 3 in
50% of total cover:	20% o	f total covera	<u>3.6</u>	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30'		f total covera	<u> </u>	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30'		f total covera	5.6 FAC	(7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30'  1. Taxico dendron radicans		f total cover	S.G. FAC	(7.6 cm) or larger in diameter at breast height (DBH).  Sapiling – Woody plants, excluding woody vines.
Herb Stratum (Plot size: 30'  1. Toxico dendron radicans 2. Vitis rotundifolia	<u>15</u>	f total covera	FAC.	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
Herb Stratum (Plot size: 30'  1. Toxico dendron radicans 2. Vitis rotundifolia	<u>15</u>	f total covera	5.6 FAC FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapiling – Woody plants, excluding woody vines.
Herb Stratum (Plot size: 30'  1. Taxico dendron radicans	<u>15</u>	f total covera	FAC. FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
Herb Stratum (Plot size: 30'  1. Toxico dendron radicans 2. Vitis rotundifolia	<u>15</u>	f total covera	5.6 FAC FACU FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30'  1. Toxico dendron radicans 2. Vitis rotundifolia	15 5 45	<del>*</del>	5.6 FAC. FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
Herb Stratum (Plot size: 30'  1. Toxico dendron radicans  2. Vitis rotundifolia  3. Parthenocissus quinque folia  4.  5.	15 5 45	<del>*</del>	5.6 FAC. FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Herb Stratum (Plot size: 30'  1. Toxico dendron radicans  2. Vitis rotundifolia  3. Parthenocissus quinque folia  4.  5.  6.	<u>15</u> 5 5	<del>*</del>	5.6 FAC. FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including
Herb Stratum (Plot size: 30'  1. Toxico dendron radicans  2. Vitis rotundifolia  3. Parthenocissus quinque folia  4.  5.	<u>15</u> 5 5	<del>*</del>	5.6 FAC. FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
Herb Stratum (Plot size: 30'  1. Toxico dendron radicans  2. Vitis rotundifolia  3. Parthenocissus quinque folia  4.  5.  6.	<u>15</u> 5 5	<del>*</del>	FAC. FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
Herb Stratum (Plot size: 30'  1. Toxico dendron radicans  2. Vitis rotundifolia  3. Parthenocissus quinque folia  4.  5.  6.	<u>15</u> 5 5	<del>*</del>	FAC. FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
Herb Stratum (Plot size: 30'  1. Toxico dendron radicans  2. Vitis rotundifolia  3. Parthenocissus quinque folia  4.  5.  6.	<u>15</u> 5 5	<del>*</del>	FAC. FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 30'  1. Toxico dendron radicans  2. Vitis rotundifolia  3. Parthenocissus quinque folia  4.  5.  6.	<u>15</u> 5 5	<del>*</del>	5.6 FAC. FACU FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
Herb Stratum (Plot size: 30')  1. Toxico dendron madicans  2. Vitis rotundifolia  3. Parthenocissus quinque folia  4.  5.  6.  7.  8.  9.	<u>15</u> 5 5	<del>*</del>	FAC. FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 30')  1. Toxico dendron madicans  2. Vitis rotundifolia  3. Parthenocissus quinque folia  4.  5.  6.  7.  8.  9.	15 5 5	<del>*</del>	FAC. FACU FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 30')  1. Toxico dendron madicans  2. Vitis rotundifolia  3. Parthenocissus quinque folia  4.  5.  6.  7.  8.  9.	15 5 5	<del>*</del>	FAC. FACU FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 30'  1. Toxico dendron malicans 2. Vitis rotundifolia 3. Parthenocissus quinque folia 4. 5. 6. 7. 8. 9. 10.	15	y y y = Total Cov	FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 30'  1. Toxico dendron malicans 2. Vitis rotundifolia 3. Parthenocissus quinque folia 4. 5. 6. 7. 8. 9. 10. 11.	15	y y y = Total Cov	FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 30'  1. Toxico dendron radicans 2. Vitis rotundifolia 3. Parthenocissus quinque folia 4. 5. 6. 7. 8. 9. 10. 11.  Woody Vine Stratum (Plot size: 30' ).	15	y y y = Total Cov	FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 30')  1. Toxico dendron malicans 2. Vitis rotundifolia 3. Parthenocissus quinque folia 4. 5. 6. 7. 8. 9. 10. 11.	15	y y y = Total Cov	FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 30'  1. Toxico dendron madicans 2. Vitis rotundifalia 3. Parthenocissus quinque falia 4. 5. 6. 7. 8. 9. 10. 11.  Som of total cover: 12. Woody Vine Stratum (Plot size: 30'  1. Parthenocissus quinque falia  1. Parthenocissus quinque falia	15	y y y = Total Cov	FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 30'  1. Toxico dendron radicans 2. Vitis rotundifolia 3. Parthenocissus quinque folia 4. 5. 6. 7. 8. 9. 10. 11.  Woody Vine Stratum (Plot size: 30' ).	15	y y y = Total Cov	FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 30'  1. Toxico dendron madicans 2. Vitis rotundifalia 3. Parthenocissus quinque falia 4. 5. 6. 7. 8. 9. 10. 11.  Som of total cover: 12. Woody Vine Stratum (Plot size: 30'  1. Parthenocissus quinque falia  1. Parthenocissus quinque falia	15	y y y = Total Cov	FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 30'  1. Toxico dendron malicans 2. Vitis rotundifolia 3. Parthenocissus quinque folia 4. 5. 6. 7. 8. 9. 10. 11.  Woody Vine Stratum (Plot size: 30' 1. Parthenocissus quinque folia 2. Toxico dendron radicans	15	y y y = Total Cov	FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 30'  1. Toxico dendron malicans 2. Vitis rotundifolia 3. Parthenocissus quinque folia 4. 5. 6. 7. 8. 9. 10. 11.  Som of total cover: 12. Woody Vine Stratum (Plot size: 30' 1. Parthenocissus quinque folia 2. Toxico dendron radicans 3. 4.	15	y y y = Total Cov	FAC. FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Herb Stratum (Plot size: 30'  1. Toxico dendron malicans 2. Vitis rotundifolia 3. Parthenocissus quinque folia 4. 5. 6. 7. 8. 9. 10. 11.  Woody Vine Stratum (Plot size: 30' 1. Parthenocissus quinque folia 2. Toxico dendron radicans	15	= Total Cover	FACL FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.
Herb Stratum (Plot size: 30'  1. Toxico dendron malicans 2. Vitis rotundifolia 3. Parthenocissus quinque folia 4. 5. 6. 7. 8. 9. 10. 11.  Som of total cover: 12.  Woody Vine Stratum (Plot size: 30'  1. Parthenocissus quinque folia 2. Toxico dendron radicans 3. 4.	15	y y y = Total Cov	FACL FACU	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic Vegetation
Herb Stratum (Plot size: 30'  1. Toxico dendron malicans 2. Vitis rotundifolia 3. Parthenocissus quinque folia 4. 5. 6. 7. 8. 9. 10. 11.  Som of total cover: 12.  Woody Vine Stratum (Plot size: 30'  1. Parthenocissus quinque folia 2. Toxico dendron radicans 3. 4. 5. 5.	15 5 5 25 5 20% o	= Total Covers	FACL FACU FACU FACU FACL	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.
Herb Stratum (Plot size: 30'  1. Toxico dendron malicans 2. Vitis rotundifolia 3. Parthenocissus quinque folia 4. 5. 6. 7. 8. 9. 10. 11.  50% of total cover: 12. Woody Vine Stratum (Plot size: 30'  1. Parthenocissus quinque folia 2. Toxico dendron rodicans 3. 4. 5. 50% of total cover:	25 5 20% o	= Total Cover	FACL FACU FACU FACU FACL	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic Vegetation
Herb Stratum (Plot size: 30'  1. Toxico dendron malicans 2. Vitis rotundifolia 3. Parthenocissus quinque folia 4. 5. 6. 7. 8. 9. 10. 11.  Som of total cover: 12.  Woody Vine Stratum (Plot size: 30'  1. Parthenocissus quinque folia 2. Toxico dendron radicans 3. 4. 5. 5.	25 5 20% o	= Total Covers	FACL FACU FACU FACU FACL	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic Vegetation
Herb Stratum (Plot size: 30'  1. Toxico dendron malicans 2. Vitis rotundifolia 3. Parthenocissus quinque folia 4. 5. 6. 7. 8. 9. 10. 11.  Som of total cover: 12. Woody Vine Stratum (Plot size: 30'  1. Parthenocissus quinque folia 2. Toxico dendron radicans 3. 4. 5. 50% of total cover:	25 5 20% o	= Total Covers	FACL FACU FACU FACU FACL	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic Vegetation
Herb Stratum (Plot size: 30'  1. Toxico dendron malicans 2. Vitis rotundifolia 3. Parthenocissus quinque folia 4. 5. 6. 7. 8. 9. 10. 11.  50% of total cover: 12. Woody Vine Stratum (Plot size: 30'  1. Parthenocissus quinque folia 2. Toxico dendron rodicans 3. 4. 5. 50% of total cover:	25 5 20% o	= Total Covers	FACL FACU FACU FACU FACL	(7.6 cm) or larger in diameter at breast height (DBH).  Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic Vegetation

Sampling Point: DS14

Profile Desc	ription: (Describe	to the depti		ment the indicator or confir	m the absence of indicate	ore.)
Depth	Matrix Color (color)			x Features % Type¹ Loc²	Texture	Remarks
(inches)	Color (molst)	<del>%</del> -	Color (moist)			
0-1	104R 3/1	<u> 100</u> .	10010 = 10	·	. <u>Sandyloan</u>	<del></del>
1-10	10YR 4/1		104R5/6		<u>Clay Kan</u>	
4-18	10YR 5/1	95	1048 214	<u>   5                                 </u>	<u>clay loam</u>	
			<u> </u>			
					· · · · · · · · · · · · · · · · · · ·	
				- <del> </del>		
1				0-Mid Od Oi	21	ining MaMatrix
	indicators: (Applic			S=Masked Sand Grains.	<sup>2</sup> Location: PL=Pore t Indicators for Proble	
Histosol	, , ,	.abio to ali t	-	elow Surface (S8) (LRR S, T,		· ·
_	pipedon (A2)			urface (S9) (LRR S, T, U)	2 cm Muck (A10)	
,	istic (A3)			cy Mineral (F1) (LRR O)		18) (outside MLRA 150A,B)
Hydroge	en Sulfide (A4)		Loamy Gleye	ed Matrix (F2)	Piedmont Floodpl	ain Solls (F19) (LRR P, S, T)
	d Layers (A5)		Depleted Ma			t Loamy Soils (F20)
	Bodies (A6) (LRR f		_	Surface (F6)	(MLRA 153B)	rial (TE2)
	ucky Mineral (A7) (L resence (A8) (LRR (		Depleted Da	irk Surface (F7)	Red Parent Mate Very Shallow Dar	
1	uck (A9) (LRR P, T)		Mari (F10) (L		Other (Explain in	
	d Below Dark Surface			chric (F11) (MLRA 151)		•
	ark Surface (A12)		Iron-Mangan	nese Masses (F12) (LRR O, F		drophytic vegetation and
	Prairie Redox (A16) (		· —	ace (F13) (LRR P, T, U)	•	logy must be present,
· -	Mucky Mineral (S1) ( Sloved Motey (S4)	LRR O, S)	_	: (F17) (MLRA 151) :rtic (F18) (MLRA 150A, 150E		ed or problematic.
, — ·	Gleyed Matrix (S4) Redox (S5)		_	loodplain Soils (F19) (MLRA 1	=	
	d Matrix (S6)			Bright Loamy Soils (F20) (ML		
Dark Su	urface (S7) (LRR P,	S, T, U)				
Restrictive	Layer (if observed	):				
Туре:						
Depth (ir	nches):		<del></del>		Hydric Soil Present?	Yes No
Remarks:						
<u> </u>						
[						

Project/Site: Centerville-Farm Field Area City/County: C	
Applicant/Owner: Tri-Cities Properties, LLC	State: VA Sampling Point: DS(5
Investigator(s): Section, Township,	Range:
Landform (hillslope, terrace, etc.): Wooded Flat Local relief (concar	/e, convex, none): <u>NOVE</u> Slope (%): <u>0 - 2</u>
Subregion (LRR or MLRA): LRRT Lat: 36° 44' 42"	Long: 710°10° 00° Datum:
Soil Map Unit Name: Acredale	NWI classification: <u>UPL</u>
Are climatic / hydrologic conditions on the site typical for this time of year? Yes N	
· ·	
Are Vegetation, Soil, or Hydrology significantly disturbed? No	
Are Vegetation, Soil, or Hydrology naturally problematic? No (	If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling poli	nt locations, transects, important features, etc.
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Yes No within a Wetland Hydrology Present?	
Remarks: This wooded area is surrounded by deep d	.tches.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15) (LRR U)	Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizospheres along Living R	· · — ·
Sediment Deposits (B2) Presence of Reduced Iron (C4)	Crayfish Burrows (C8) (C6) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Recent Iron Reduction in Tilled Soils ( Algai Mat or Crust (B4) Thin Muck Surface (C7)	Geomorphic Position (D2)
Iron Deposits (B5)  Other (Explain in Remarks)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No/ Depth (inches):	
Water Table Present? Yes NoDepth (inches):	ا ر
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe)	tional if qualitable:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available.
Remarks:	
Wooded Flat surrounded by 5'd	ern ditches
	·

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species		
1. Liquidambar Styraciflua	40	7	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
20 )	<u> </u>	<del></del>		A THE ALE OBL, FACEV, OF FAC
2 Pinus tarda	25	<u> </u>	FAL	Total Number of Dominant
3. Acer rubrum	25	Ÿ	FAC	Species Across All Strata: (B)
				Opedies Across Arrollata.
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 83 (A/B)
6.				(11)
0	700			Prevalence Index worksheet:
		= Total Co		
50% of total cover: 45	20% o	f total cover	r. 183	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30' )	_			OBL species x 1 =
Sabilitu Stratum (Pict size: 55	و	V	i	FACW species x 2 =
1. ACET PUBLUM	ـــد		EAC	l e e e e e e e e e e e e e e e e e e e
1. Acer rubrum 2. Querus nigra-	5	Ą	FAC.	FAC species x 3 =
	. ———			FACU species x 4 =
3				UPL species x 5 =
4				i i i i i i i i i i i i i i i i i i i
5				Column Totals: (A) (B)
6				Prevalence Index = B/A =
	10	= Total Co	ver	Hydrophytic Vegetation Indicators:
50% oftotal cover:5				
Su% of total cover:	20% 0	total cove	·	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30')			_	2 - Dominance Test is >50%
1. Vaccinium Corumboscum	ID	7	FACLU	3 - Prevalence Index is ≤3.0¹
a August Diago		4	5	<u> </u>
2. Quercus nigra.	_د_	. <u> </u>		Problematic Hydrophytic Vegetation (Explain)
3. Asimina triloha.	_2_	<u> </u>	FAC	
4				1
	-		. ——	Indicators of hydric soil and wetland hydrology must
5	. ——			be present, unless disturbed or problematic.
6				Definitions of Five Vegetation Strata:
	17	= Total Co		•
				Tree - Woody plants, excluding woody vines,
50% of total cover: 8.5	<u>)</u> 20% c	f total cove	r: <i><b>3.7</b></i>	approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 30'				(7.6 cm) or larger in diameter at breast height (DBH).
1. Toxicodendron radicans	20	4	FAC	
				Sapling - Woody plants, excluding woody vines,
2. Lonicera japonica.	<u> 20</u>	. — 7.—	EACLL	approximately 20 ft (6 m) or more in height and less
3. Parthenocistus quinquefolio	1.2n	Ÿ	FACU	than 3 in. (7.6 cm) DBH.
1		<del></del>	بسيست	Shrub - Woody plants, excluding woody vines,
4				approximately 3 to 20 ft (1 to 6 m) in height.
5				approximately 5 to 20 k (1 to 6 m) in neight.
6				Herb - All herbaceous (non-woody) plants, including
<b>}</b>		-		herbaceous vines, regardless of size, and woody
7			· ——	plants, except woody vines, less than approximately
8				3 ft (1 m) in height.
9				Woody vine - All woody vines, regardless of height.
10				
11,				
	ユヘ	- Total Ca		
	_ <del></del>	= Total Co		
50% of total cover:3	<b>5</b> 20% c	of total cove	r. <u>//</u>	
Woody Vine Stratum (Plot size: 30')				Ì
1. Toxicocendron radicans	_	V	EAC	1
	_پ_	. <del></del> _	- <del>771</del>	
2. Vitis rotundifolia	<u> کی                                    </u>	<u> </u>	EAC	
3.		,		
			· <del></del>	
4			. ——	
5				Hydrophytic
		= Total Co	*/95	Manageria
		•		Present? Yes No No
50% of total cover:	20% c	of total cove	r. <u>/ . (ø</u>	
Remarks: (If observed, list morphological adaptations bel-	OW).			
	•			

Depth	hmour (nascupa i	o tne aepin	needed to docum	nent the I	ndicator o	r connrm	the absence	or maicators.)	
	Matrix		Redox	r Feature:					
(inches)	Color (maist)		Color (moist)	%	Type <sup>1</sup>	Loc²	Texture	Remarks	
0-1	LOYR 3/1	<u>100</u> -					<u>sandy</u>	Joan	_
1-10	10YR 4/1	95	104R516	5			clay	loam	_
6-18	104R 5/1	95	104R 514	5			clau	lean	
									_
	10.0								- 1
	<del> </del>								-
									_
<b> </b>									
			<u>leduced Matrix, MS</u>			ins.		PL=Pore Lining, M=Matrix.	
		able to all Li	RRs, unless other		-			for Problematic Hydric Solis <sup>3</sup> :	
Histosol (A	=		Polyvalue Be					fuck (A9) (LRR O)	
Histic Epip	pedon (A2)		Thin Dark Su Loamy Mucky			-		fuck (A10) (LRR S) ed Vertic (F18) (outside MLRA 150A)	ъ,
<u> </u>	Sulfide (A4)			•		0,	_	ont Floodplain Soils (F19) (LRR P, S,	
1 —	ayers (A5)		Depleted Mal		·· <del>- ,</del>		_	lous Bright Loamy Soils (F20)	•
Organic B	odies (A6) (LRR P	T, U)	Redox Dark S		F6)			RA 153B)	
	cy Mineral (A7) (LF		Depleted Dar					arent Material (TF2)	
	ence (A8) (LRR U	)	Redox Depre	•	8)			hallow Dark Surface (TF12)	
	( (A9) (LRR P, T)	- /A11\	Mari (F10) (L	•	/MI DA 46	41	Other	(Explain in Remarks)	
1	Below Dark Surfact (Surface (A12)	(A11)	Depleted Oct			-	T) <sup>3</sup> India	ators of hydrophytic vegetation and	
1	irie Redox (A16) (fi	ALRA 150A)					•	land hydrology must be present.	
Sandy Mu	cky Mineral (S1) (L	.RR O, S)	Delta Ochric				unk	ess disturbed or problematic.	
1	yed Matrix (S4)		Reduced Ver		-	-			
Sandy Re			Piedmont Flo	-				4700)	
	Matrix (S6) ace (S7) (LRR <b>P, S</b>	T 10	Anomalous E	ingnt Loai	my Solls (F	20) (MILK	A 149A, 153C	, 1530)	
	yer (if observed):						1		
Туре:	, ( o).								
1	es):						Hydric Soll	Present? Yes NoNo	
Remarks:			<del>_</del>				1174110 0011		
TCHERS.									
Romand.									
rtomarks.									
romans.									
resinans.									
Komens.									
i i									
Normana.									
Troing No.									
romans.									
Troing No.									
i i									
Normal No.									
i i									

Project/Site: Centerville - Farm FieldArea Cityle	county: Chesaneake Sampling Date: 05/10/16
Applicant/Owner: Tri-Cities Properties, LLC	State: VA Sampling Point: DSIL
A.41 ' '	on, Township, Range:
— F # 1	refief (concave, convex, none): None Slope (%): O - 2
Subregion (LRR or MLRA): LRRT Lat: 36°44'	
Soil Map Unit Name: Acredale	NWI classification: UPL
Are climatic / hydrologic conditions on the site typical for this time of year?	<u> </u>
	,
Are Vegetation, Soil, or Hydrology significantly distur	
Are Vegetation, Soil, or Hydrology naturally problems	atic? No (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Yes No	Is the Sampled Area within a Wetland? Yes No
This field is surrounded by deep	ditches and has smales through it.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15) (LRI	
Saturation (A3) Hydrogen Sulfide Odor (I	
Water Marks (B1) Oxidized Rhizospheres a Presence of Reduced Iro	
Orift Deposits (B3) Recent Iron Reduction in	
Algal Mat or Crust (B4) Thin Muck Surface (C7)	Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Remark	
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	
'	

ree Stratum (Plot size: 30' )	% Cover	Dominant Species?		Dominance Test worksheet:  Number of Dominant Species
•				That Are OBL, FACW, or FAC:
				Total Number of Dominant Species Across All Strata:  (B)
				Percent of Dominant Species That Are OBL, FACW, or FAC:
		= Total Cov		Prevalence index worksheet:
50% of total cover:				Total % Cover of:Multiply by:
apling Stratum (Plot size: 30')				OBL species x1 =
				FACW species x 2 =
				FAC species x 3 =
				FACU species x 4 =
				UPL species x 5 =
				Column Totals: (A) (I
	_			Prevalence Index = B/A =
		= Total Cov	_	Hydrophytic Vegetation Indicators:
50% of total cover:	: 20% of	total cover:		1 - Rapid Test for Hydrophytic Vegetation
hrub Stratum (Plot size: 30' )				2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.01
				Problematic Hydrophytic Vegetation¹ (Explain)
				14n discharge of hydric and continued by declare, magnification
•				'Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Definitions of Five Vegetation Strata:
		= Total Cov	 er	To Manda planta analydia a yyanda da a
50% of total cover. lerb Stratum (Plot size: 30' )	: 20% of	total cover:	0	Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH)
Urochloa platuphylla	20	Y	FAC	Sapling - Woody plants, excluding woody vines,
Allium conadense		7	FACL	approximately 20 ft (6 m) or more in height and less
Vicia Sativa			FACU	than 3 in. (7.6 cm) DBH.
Solanum ptycanthum		7	FACU	Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
				Herb - All herbaceous (non-woody) plants, including
				herbaceous vines, regardless of size, and woody
				plants, except woody vines, less than approximately 3 ft (1 m) in height.
D				Woody vine - All woody vines, regardless of height
1				
		= Total Cov		
	: <u>14.5</u> 20% of	total cover:	0.8	
Voody Vine Stratum (Plot size: 30'	.)			
•				
		-		
			<del></del>	
•				
•				Hydrophytic
E00/ _E1_1-1		= Total Cov	_	Vegetation   Present? Yes No
50% of total cover temarks: (If observed, list morphological adaptation	20% of <u>ب</u>	total cover	<u></u>	

Sampling P	nt: TVS	110
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Profile Description: (Describe to the depti	needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type¹ Loc²	Texture Remarks
0-5 1048 42 95	104R 5 4 5	sandy loan
5-20 104R4'11 95	INR 514 5	clay barn
	<del></del>	<del></del>
In O Constitution Deposits of Deposits	On the add Makin MO-Marked Cond Online	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Type: C=Concentration, D=Depletion, RM= Hydric Soil Indicators: (Applicable to all I		Indicators for Problematic Hydric Solis <sup>3</sup> :
1		
Histosol (A1) Histic Epipedon (A2)	Polyvalue Below Surface (S8) (LRR S, T, U Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
Black Histic (A3)	Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
Stratified Layers (A5)	Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T, U)	Redox Dark Surface (F6)	(MLRA 153B)
5 cm Mucky Mineral (A7) (LRR P, T, U)	Depleted Dark Surface (F7)	Red Parent Material (TF2)
Muck Presence (A8) (LRR U)	Redox Depressions (F8)	Very Shallow Dark Surface (TF12)
1 cm Muck (A9) (LRR P, T)	Marl (F10) (LRR U)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Ochric (F11) (MLRA 151)	
Thick Dark Surface (A12)	Iron-Manganese Masses (F12) (LRR O, P,	
Coast Prairie Redox (A16) (MLRA 150A	· <del></del>	wetland hydrology must be present, unless disturbed or problematic.
Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4)	Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B)	·
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 14	
Stripped Matrix (S6)	Anomalous Bright Loamy Soils (F20) (MLR	· ·
Dark Surface (S7) (LRR P, S, T, U)		
Restrictive Layer (if observed):		
Туре:		
Depth (inches):	<del></del>	Hydric Soil Present? Yes No No
Remarks:		
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1		
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Project/Site: Centerville - Farm Field Area City/County: Checapeake sampling Date: 05/10/16
Applicant/Owner: Tri-Cities Properties LLC State: VA Sampling Point: DS 17
Investigator(s): Roth Section, Township, Range:
Landform (hillslope, terrace, etc.): Wonded Flat Local relief (concave, convex, none): None Slope (%): 0-2
Subregion (LRR or MLRA): Lat: 36°44′42
Soil Map Unit Name: Tomstley-Nimmo NWI classification: UPL
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? NO Are "Normal Circumstances" present? Yes V
Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Variable Sampled Ama
Hydric Soil Present? Yes I No
Wetland Hydrology Present? Yes No Within a Wetland? Yes No Within a Wetland?
Remarks:
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15) (LRR U) Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2)
Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8)
Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface (C7) Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)
Field Observations:
Surface Water Present? Yes No Depth (inches):
Water Table Present? Yes No Depth (inches):
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No
(includes capillary fringe)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
Area surrounded by ditches 4' deep

= Total Cover

20% of total cover: 1.8

50% of total cover: 4

Remarks: (If observed, list morphological adaptations below).

Hydrophytic

Vegetation Present?

Profile Description: (Describe to the depth needed to document the indicator	or confirm the absence of indicators.)
Depth Matrix Redox Features	
(inches) Color (moist) % Color (maist) % Type <sup>1</sup>	Loc <sup>2</sup> Texture Remarks
0-3 104R311 100	Sandy loans
3-10 104R411 95 104R514 5	Clay loan
10-20 LOYK 5/1 45 104R 5/4 5	clay loans
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Gr	ains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Solis <sup>3</sup> :
Histosol (A1) — Polyvalue Below Surface (S8) (L	RR S, T, U) 1 cm Muck (A9) (LRR O)
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S,	T, U) 2 cm Muck (A10) (LRR S)
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR	O) Reduced Vertic (F18) (outside MLRA 150A,B)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
Stratified Layers (A5) Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6)	(MLRA 153B)
5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7)	Red Parent Material (TF2)
Muck Presence (A8) (LRR U) Redox Depressions (F8)	Very Shallow Dark Surface (TF12)
1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Ochric (F11) (MLRA 1:	· ·
Thick Dark Surface (A12) iron-Manganese Masses (F12) (Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T	
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)	unless disturbed or problematic.
Sandy Gleyed Matrix (S4)  Reduced Vertic (F18) (MLRA 15	·
Sandy Redox (S5) Piedmont Floodplain Soils (F19)	•
<u> </u>	F20) (MLRA 149A, 153C, 153D)
Stripped Matrix (36) Anomalous Bright Loamy Soils (	
<u> </u>	aby (major 1909, 1909)
Surpped Matrix (S6) Anomalous Bright Loamy Solis ( Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):	20) (112101 1000)
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):	(100), (110), (100), (100)
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	Hydric Soil Present? Yes No
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	
Dark Surface (S7) (LRR P, S, T, U)  Restrictive Layer (if observed):  Type:  Depth (inches):	

Project/Site: Centerville - Farm Field Area City/Coun	ty: Chesaneake Sampling Date: 05/10/16
Applicant/Owner: Tri-Cities Properties LLC	State: VA Sampling Point: <u>NS 18</u>
	ownship, Range:
	of (concave, convex. none): None Slope (%): 0-2
	12" Long: 76° 10' 00" Datum:
· · · · · · · · · · · · · · · · · · ·	
Soil Map Unit Name: Acredate	NWI classification: UPL
Are climatic / hydrologic conditions on the site typical for this time of year? Yes _	
Are Vegetation, Soil, or Hydrology significantly disturbed	? No Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampli	ng point locations, transects, important features, etc.
Hydric Soil Present?  Wetland Hydrology Present?  Yes No with	the Sampled Area thin a Wetland? Yes No
Deep ditches adjacent to area.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15) (LRR U)	
Saturation (A3) Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizospheres along	· - · · · · · · · · · · · · · · · · · ·
Sediment Deposits (B2) Presence of Reduced Iron (C	<u> </u>
Drift Deposits (B3) Recent Iron Reduction in Tille	
Algal Mat or Crust (B4) Thin Muck Surface (C7)	Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Remarks) Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3) FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	Springfilm moss (20) (Elde 1, 0)
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	<del></del> ;
Saturation Present? Yes No Depth (inches):	
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous)	is inspections), if available:
Remarks:	
	•
	İ
	<b>.</b>

	Ab - La - Barria and Indicates	Dominance Test worksheet:
Tree Stratum (Plot size: 30'	Absolute Dominant Indicator % Cover Species? Status	
1 Tiee Stratum (Plot Size. 55		Number of Dominant Species
1. Pinus taedas	40 Y FAC	That Are OBL, FACW, or FAC: (A)
2 Liquidambar Styraciflua	(30 Y FAC	Total North or of Besident
	25 N FAC	Total Number of Dominant Species Across All Strata:  (B)
3. Acet rubrum 4. Sossofras albidum		Species Across Ali Strata. (b)
	30 Y FACU	Percent of Dominant Species
5. Prunus Seratinas	20 N FACU	That Are OBL, FACW, or FAC: 44 (A/B)
6.		1114740 002(171011; 011710).
	145 = Total Cover	Prevalence Index worksheet:
		Total % Cover of: Multiply by:
50% of total cover: 12.	5 20% of total cover: <u>29</u>	
Sapling Stratum (Plot size: 30'	_	OBL species x 1 =
1. Acer rubrum	5 V EX	FACW species x 2 =
"-/IGLI TUOTUYY		FAC species x 3 =
2		
3		FACU species x 4 =
4		UPL species x 5 =
1		Column Totals: (A) (B)
5		· · ·
6		Prevalence Index = B/A =
	5 _ = Total Cover	Hydrophytic Vegetation Indicators:
E00/ -tit- 7	5 20% of total cover:	
	20% of total cover:	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30'		2 - Dominance Test is >50%
1. Querus rubra	10 Y FACU	3 - Prevalence Index is ≤3.01
2. Vaccinium Corumbosum	5 N FACW	Problematic Hydrophytic Vegetation¹ (Explain)
3. Asimina trilona		Problematic Hydrophytic Vegetation (Explain)
4.5 assafras albidum	2 N FACU	¹indicators of hydric soil and wetland hydrology must
5. Querous phellos	2 N FAC	be present, unless disturbed or problematic.
16. UWECCUS WICHOUX (1	1 N FACW	Definitions of Five Vegetation Strata:
	N 26 = Total CoverFACL	
-		Tree - Woody plants, excluding woody vines,
	20% of total cover: 5.2	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30'	V =	(1.0 0.0) 0. 10.00 1. 20.000
1. Parthenorissus quinquefolio	alo_I_ FACU	Sapling - Woody plants, excluding woody vines,
2. Lanicera japonila.	_5_Y_FACU	approximately 20 ft (6 m) or more in height and less
3. Vitis rotunditalia	2 N FAC	than 3 in. (7.6 cm) DBH.
o. VIII. FOI OF ISTANCES		
4		Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
5		approximately 5 to 20 if (1 to 6 iii) iii fleight.
6		Herb - All herbaceous (non-woody) plants, including
7		herbaceous vines, regardless of size, and woody
		plants, except woody vines, less than approximately
°. ———————————————————————————————————		3 ft (1 m) in height.
9		Woody vine - All woody vines, regardless of height.
10		Troody vine - All woody vines, regardless of neight.
11.		
	17 = Total Cover	
	5_ 20% of total cover: <u>3. 7</u>	<u> </u>
Woody Vine Stratum (Plot size: 30')		
1. Vitis rotundifolia.	.3 Y FAC.	
7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	5/2/	1
2 Hodera helix	_ 12	
3.	<u> </u>	
4		
5.		Hudronbudio
	= Total Cover	Hydrophytic Vegetation
		Present? Yes No
50% of total cover:	20% of total cover: 1.2	
Remarks: (If observed, list morphological adaptations be	low).	

Profile Description: (Describe to the depth needed to document the indicate	or or confirm the absence of Indicators.)
Depth Matrix Redox Features	
(inches) Color (maist) % Calar (maist) % Type	e <sup>1</sup> Loc <sup>2</sup> Texture Remarks
0-3 104R3/1 100	<u>Sandulaam</u>
3-10 104R4/1 95 104R514 5	clay toon
10-20 LOYR 5/1 95 104R 5/4 5	alay loon
	<del></del>
¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand	Grains. <sup>2</sup> Location: PL≂Pore Lining, M≔Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Solis <sup>3</sup> :
Histosol (A1) Polyvalue Below Surface (S8	) (LRR S, T, U) 1 cm Muck (A9) (LRR O)
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR	· · · · · · · · · · · · · · · · · · ·
Black Histic (A3) Loamy Mucky Mineral (F1) (I	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Matrix (F3)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6)	Anomalous Bright Loamy Soils (F20) (MLRA 153B)
5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7)	Red Parent Material (TF2)
Muck Presence (A8) (LRR U) Redox Depressions (F8)	Very Shallow Dark Surface (TF12)
1 cm Muck (A9) (LRR P, T) Mari (F10) (LRR U)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLR.	
Thick Dark Surface (A12) Iron-Manganese Masses (F1	,, ,,,
Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR I Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 150A)	
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 1:  Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA	· ·
Sandy Redox (S5) Piedmont Floodplain Soils (F	
1 ————————————————————————————————————	ls (F20) (MLRA 149A, 153C, 153D)
Dark Surface (S7) (LRR P, S, T, U)	
Restrictive Layer (If observed):	
Туре:	
Depth (inches):	Hydric Soil Present? Yes V No No
Remarks:	
i e	

Projecusite: Centerville-Farm Field Area city/county: Ches	aneake Sampling Date: 05/10/16		
	State: VA Sampling Point: DSI 9		
Investigator(s): Roth Section, Township, Rang	ne:		
	nvex. none): None Slope (%): 0-2		
Subregion (LRR or MLRA): LRRT Lat: 36°441 42" Lor	ing: 76°10¹00" Datum:		
	_		
Soil Map Unit Name: Acredale	NWI classification: UPL		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No			
Are Vegetation, Soil, or Hydrology significantly disturbed? No Are "No	ormal Circumstances" present? Yes V No No		
Are Vegetation, Soil, or Hydrologynaturally problematic? No (If need	ded, explain any answers in Remarks.)		
SUMMARY OF FINDINGS - Attach site map showing sampling point loc	cations, transects, important features, etc.		
Hydrophytic Vegetation Present? Yes No In the Sampled A			
Hydric Soil Present?			
Wetland Hydrology Present? Yes No Within a Wetland	YesNO		
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)		
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)		
High Water Table (A2) Marl Deposits (B15) (LRR U)	Drainage Patterns (B10)		
Saturation (A3) Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)		
Water Marks (B1) Oxidized Rhizospheres along Living Roots (	(C3) Dry-Season Water Table (C2)		
Sediment Deposits (B2) Presence of Reduced Iron (C4)	Crayfish Burrows (C8)		
Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4) Thin Muck Surface (C7)	Geomorphic Position (D2)		
Iron Deposits (B5) Other (Explain in Remarks)	Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)		
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)		
Field Observations:			
Surface Water Present? Yes No Depth (inches):			
Water Table Present? Yes No Depth (inches):			
Saturation Present? Yes No/ Depth (inches): Wetl (includes capillary fringe)	land Hydrology Present? Yes No		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections),	, if available:		
Remarks:			
Lateral ditches through field.			
	•		
	1		
	1		

# **VEGETATION (Five Strata)** – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
<u>Tree Stratum</u> (Plot size: 30'		Species?		Number of Dominant Species		
1				That Are OBL, FACW, or FAC:	/ u	A)
					· ·	•
				Total Number of Dominant	<b>2</b> (	
3			<del></del>	Species Across Ali Strata:	(	B)
4				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC:	50 a	A/B)
6					,	,
	$\overline{}$	= Total Cov	<u> </u>	Prevalence index worksheet:		
PROV. addated a sussess.			_	Total % Cover of: Mul	tiply by:	
50% of total cover:	<u>3</u> 20% 01	total cover:	<u> </u>	OBL species x 1 =		
Sabling Stratum (Plot size: 30' )				FACW species x 2 =		
1,				· — — —		
2				FAC species x 3 = _		
3				FACU species x 4 = _		
				UPL species x 5 = _		
4				Column Totals: (A) _		(B)
5			<del></del>			
6				Prevalence Index = B/A =		
		= Total Cov	er	Hydrophytic Vegetation Indicators:		
50% of total cover:	20% of	total cover:	0	1 - Rapid Test for Hydrophytic Ve		
Shrub Stratum (Plot size: 30'				1 - · · · · · · · · · · · · · · · · · ·	geradon	
				2 - Dominance Test is >50%		
1				3 - Prevalence Index is ≤3.01		
2				Problematic Hydrophytic Vegetation	on¹ (Explain)	)
3.						
4		***************************************		Indicators of hydric soil and wetland h	vdrology mu	ist
5				be present, unless disturbed or proble		
6.				Definitions of Five Vegetation Strate	a:	
		= Total Cov				
			_	Tree - Woody plants, excluding wood		
50% of total cover:	20% of	total cover		approximately 20 ft (6 m) or more in he		
Herb Stratum (Plot size: 30'		N		(7.6 cm) or larger in diameter at breas	t neight (DB)	H).
1. Urochloa platyphylla	30		EAC	Sapling - Woody plants, excluding we	oody vines.	
2 Curcubita sepo	10		UPL	approximately 20 ft (6 m) or more in he		S
a Siling and a sold and	2	$\overline{\Lambda}$	FACIL	than 3 in. (7.6 cm) DBH.		
				Shrub - Woody plants, excluding woo	whitings	
				approximately 3 to 20 ft (1 to 6 m) in h		
				, , , , , , , , , , , , , , , , , , , ,		
6				Herb - All herbaceous (non-woody) pl		ng
7				herbaceous vines, regardless of size, plants, except woody vines, less than		<b>.</b>
8				3 ft (1 m) in height.	арргожинасе	ıy
9.						
10				Woody vine - All woody vines, regard	dess of heigh	ht.
11	7/2			<u> </u>		
		= Total Cov	A . I			
50% of total cover: _2]	20% of	f total cover	<u> 84</u>			
Woody Vine Stratum (Plot size: 30')			•	1		
1				1		
2						
3						
4						
5				Hydrophytic	_	
		= Total Cov	er er	Vegetation		
50% of total cover:			~	Present? Yes No	<u> </u>	
Remarks: (If observed, list morphological adaptations belo				1		
	··· /·					

Depth Matrix		
	Redox Features	
(inches) Color (moist) %	Color (moist) % Type <sup>1</sup> Loc <sup>2</sup>	Texture Remarks
0-5 104R4/2 95 1	OR 514 <u>5</u>	sandy loan
5-20 104R4/1 95 1	OYR 5 4 5	clay loam
101617	<u> </u>	
		····
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Re		<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LR	Rs, unless otherwise noted.)	Indicators for Problematic Hydric Solis <sup>3</sup> :
Histosol (A1)	Polyvalue Below Surface (S8) (LRR S, T, U)	1 cm Muck (A9) (LRR O)
Histic Epipedon (A2)	Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
Black Histic (A3)	Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
Stratified Layers (A5)	Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T, U)	Redox Dark Surface (F6)	(MLRA 153B)
5 cm Mucky Mineral (A7) (LRR P, T, U)	Depleted Dark Surface (F7)	Red Parent Material (TF2)
Muck Presence (A8) (LRR U)	Redox Depressions (F8) Marl (F10) (LRR U)	Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11)	Depleted Ochric (F11) (MLRA 151)	Other (Explain in Remaiks)
Thick Dark Surface (A12)	tron-Manganese Masses (F12) (LRR O, P, T	n 3Indicators of hydrophytic vegetation and
Coast Prairie Redox (A16) (MLRA 150A)		wetland hydrology must be present,
Sandy Mucky Mineral (S1) (LRR O, S)	Delta Ochric (F17) (MLRA 151)	unless disturbed or problematic.
Sandy Gleyed Matrix (S4)	Reduced Vertic (F18) (MLRA 150A, 150B)	
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 149	A)
Stripped Matrix (S6)	Anomalous Bright Loamy Soils (F20) (MLRA	149A, 153C, 153D)
Dark Surface (S7) (LRR P, S, T, U)		
Restrictive Layer (if observed):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes No
		Tryunc don't rosellt 105_5 tto
Remarks:		11yune dan 11dan 11da 11da 11da 11da 11da 11da
		11yuno dan 11dan 11
		Tryant don't rosent 1 703 tto
		Tryant don't rosent 1 703 tto
		Tryant doi: 1703 tto
		Tryant doi: 1703 tto
		Tryant doi: 1703 tto
		Tryanc don't rosent 1 705 tto
		Tryane doi: 1703 Ro
		Tryane doi: 1703 Ro
		Tryanc doi: 1703 tto
		Tryane doi: 1703 tto
		Tyune dan Frasant 103 tto
		Tryanc doi: 1703 tto
		Tryanc don't rosent 105 tto
		Tyune doi: 1703 tto
		Tyune doi: 1703 tto
		Tyune doi: 1703 tto
		Tyune doi: 1.03 tto
		Tyune doi: 1.03 tto
		Tyune doi: 1.03
		Tyune doi: 1.03
		Tyune doi: 1.03

Project/Site: Centerville-Farm Field Area. City/County: 1	hesapeake sampling Date: 05/10/10
	State: VA Sampling Point: DS20
Investigator(s): Roth Section, Township	<u> </u>
	ve, convex. none): None Slope (%): 0-2
Subregion (LRR or MLRA): LRRT Lat: 36°44' 42"	
Soil Map Unit Name: Acredate	NWI classification: 11PL
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	•
Are Vegetation, Soil, or Hydrology significantly disturbed? ~6	Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic? No	
SUMMARY OF FINDINGS – Attach site map showing sampling poi	
Hydrophytic Vegetation Present? Yes No	
Hydrophytic Vegetation Present? Yes No Is the Sam Hydric Soil Present? Yes No Is the Sam	
Wetland Hydrology Present? Yes No	etland? Yes No
Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15) (LRR U)	Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizospheres along Living in Sediment Pennsite (R2) Presence of Reduced lang (C4)	· · · — · · · · · · · · · · · · · · · ·
Sediment Deposits (B2) Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Drift Deposits (B3) Recent Iron Reduction in Tilled Soils Algal Mat or Crust (B4) Thin Muck Surface (C7)	(C6) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Remarks)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tione) if available:
Describe Necoties Data (stream gauge, monitoring work acrisi priotos, proviosa mapor	audis), ii avanaoie.
Remarks:	
Nontains.	
	;

#### Sampling Point: BS20 VEGETATION (Five Strata) - Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: 30') % Cover Species? Status **Number of Dominant Species** That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet: = Total Cover Total % Cover of: Multiply by: 50% of total cover: 20% of total cover: 5 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_ Sapling Stratum (Plot size: 30' FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_ FAC species \_\_\_\_\_ x 3 = \_\_\_\_ FACU species \_\_\_\_\_ x 4 = \_\_\_\_ UPL species \_\_\_\_\_ x 5 = \_\_\_\_ Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B) Prevalence index = B/A = \_\_\_\_\_ = Total Cover Hydrophytic Vegetation Indicators: 50% of total cover: 20% of total cover. 2 \_\_\_ 1 - Rapid Test for Hydrophytic Vegetation Shrub Stratum (Plot size: 30' 2 - Dominance Test is >50% \_\_\_ 3 - Prevalence Index is ≤3.01 Problematic Hydrophytic Vegetation (Explain) <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Five Vegetation Strata: \_ = Total Cover Tree - Woody plants, excluding woody vines, 50% of total cover: \_\_\_\_\_\_ 20% of total cover: \_\_\_\_\_\_\_ approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Herb Stratum (Plot size: 30' 1. Triticum gestivum Sapting - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. 6 Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine - All woody vines, regardless of height. 73 = Total Cover 50% of total cover: 36.5 20% of total cover. 14.6 Woody Vine Stratum (Plot size: 30')

= Total Cover

Remarks: (If observed, list morphological adaptations below).

Hydrophytic

Vegetation Present?

Profile Desc	ription: (Describe	to the dept	h needed to docum	ent the i	ndicator	or confirm	the absence	of Indicators	i.)
Depth	Matrix			Feature		<del></del>	<u>.</u> .		
(inches)	Color (moist)	<u></u> —%	Color (moist)	<u> </u>	_Type'	Loc <sup>2</sup>	Texture		Remarks
0-5	TOAK A 3		104R514	5			<u>-sand</u> e	Loan	
5-20	101K4/1	95.	LOYRSIY	_5_			<u>clay</u>	loan	
				-					
ļ <del></del>	<del></del>								<del></del>
							<del></del>		
	oncentration, D=Dep					ains.			ing, M=Matrix.
-	indicators: (Applic	able to all l							atic Hydric Solis³:
Histosol			Polyvalue Bel					luck (A9) (LR luck (A10) (L	•
, <del></del>	olpedon (A2) stic (A3)		Thin Dark Sur Loarny Mucky					/luck (A10) (L ed Vertic (E1)	B) (outside MLRA 150A,B)
I —	en Sulfide (A4)		Loamy Gleyer			. •,	_	-	Soils (F19) (LRR P, S, T)
	Layers (A5)		Depleted Mat				_	•	oamy Soils (F20)
_	Bodies (A6) (LRR P		Redox Dark S		-		•	RA 153B)	
_	icky Mineral (A7) (Li		Depleted Dari					arent Materia	•
. —	resence (A8) (LRR U	))	Redox Depre	•	8)			inallow Dark : (Explain in Re	Surface (TF12)
I —	ick (A9) (LRR P, T) d Below Dark Surfac	e (A11)	Marl (F10) (LI	•	/MIRA1	51)	Other	(Explain in Re	inars)
ı — ·	ark Surface (A12)	· (\(\cap \)	iron-Mangane		-		T) <sup>3</sup> Indic	ators of hydr	ophytic vegetation and
. —	rairie Redox (A16) (F	ALRA 150A					-	land hydrolog	y must be present,
Sendy N	łucky Mineral (S1) (I	LRR O, S)	Delta Ochric	(F17) (MI	LRA 151)		uni	ess disturbed	or problematic.
1 —	Sleyed Matrix (S4)		Reduced Veri				0.41		
	Redox (S5)		Piedmont Flo	•		-	=	1530)	
	l Matrix (S6) rface (S7) <b>(LRR P, S</b>	S T III	Andinatous B	ngni Loa	illy Sons (	F20) (MILIC	A 149A, 153C	, 1550)	
	Layer (if observed):								
Type:									
Depth (in	ches):						Hydric Soil	Present?	Yes No
Remarks:	, , , , , , , , , , , , , , , , , , , ,						<u> </u>		

STAPLE - FREE ZONE ELBOW ROAD FARM FIELDS MARINE RESOURCES COMMISSION RECEIVED OCT 2 6 2016 \* "Velband Limits and Wisters of the U. S. Distriction of the Contaminate Farm Flads Site. Desirection of the Contamille Farm Flads Site. Cased Anguel S. 2016, prepared by Roth Envisionaged, LLCs. 6, prepared by Roth PROJECT -PROJECT LOT GEOMETRY REQUIREMENTS:
Proposed Zuring: R-105
Front Setback: 25 feet
Mehrmun Lox Aves: 10,000 square feet
Mehrmun Lox Worth (af Front Setback Line: 80 feet
Mehrmun Lox Frontage (at RAV); 67 feet ELBOW ROAD FARM FIELDS Ex. Nor-Jurisdictional Disches Companied French Unagested French Companied French Constitution Conceptual Layout Plan #5 for VMRC ELBOW ROAD FARM FIELDS

ELBOW ROAD
TAX PARCELS 0390000000380, 4 0390000000382 AMERICAN Engineering American Engineering Associates - Southeast, P.A. 448 Wilding Diver | Sulto 170 Virginia Benech, Virginia 23452 (757) 468 - 6800 WASHINGTON BOROUGH CHESAPEAKE, VIRGINIA

Project/Site: Centerville-Farm Field Area City/County. Of	Nesoneake Sampling Date: 05/15/14		
	State: VA Sampling Point: DS1		
Investigator(s): Rotto Section, Townshi			
Landform (hillstope, terrace, etc.): Terrace / Flat Local relief (conc			
	Long: 710 10 00" Datum:		
Soil Map Unit Name: Sorte	NWI classification: LIPL		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes			
Are Vegetation Soil, or Hydrology significantly disturbed? NO			
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)		
SUMMARY OF FINDINGS - Attach site map showing sampling po	int locations, transects, important features, etc.		
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Remarks:  Yes No  Is the Sar within a No  Within a No	mpled Area Netland? Yes No		
Deep ditches on a sides of this are	a.		
HYDROLOGY			
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)		
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)		
High Water Table (A2)  Mart Deposits (B15) (LRR U)  Solventian (A3)	Drainage Patterns (B10)		
Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Oxidized Rhizospheres along Living	Moss Trim Lines (B18)  Roots (C3) Dry-Season Water Table (C2)		
Sediment Deposits (B2)  Presence of Reduced Iron (C4)	Crayfish Burrows (C8)		
Drift Deposits (B3) Recent Iron Reduction in Tilled Soils			
Algal Mat or Crust (B4) Thin Muck Surface (C7)	Geomorphic Position (D2)		
Iron Deposits (B5) Other (Explain in Remarks)	Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)		
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)		
Field Observations:			
Surface Water Present? Yes No Depth (inches):			
Water Table Present? Yes NoDepth (inches):			
Saturation Present? Yes No Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	ections), if available:		
Remarks:			
	,		

VEGETATION (	Eiva Strata	موا ا ـــ ۱	ecientific	namee	of pl	ante
VEGEIAIIUN	rive Strata	- 056	SCIENTING	Hallies	OI PR	ai ito.

221		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species'		Number of Dominant Species
1. Liquidambar styraciflua.	50	_ Y	FAC	That Are OBL, FACW, or FAC: (A)
2 Pinus taxa	30	7	FAC	
	<u> </u>			Total Number of Dominant
3. Acer rubrum			FAC	Species Across All Strata: (B)
4,				Barrant of Bossin and Consider
5.				Percent of Dominant Species That Are OBL, FACW, or FAC: L (A/B)
	• ———	-	· <del></del>	That Are OBL, FACW, or FAC: (A/B)
6				Prevalence index worksheet:
		= Total Co		
50% of total cover: 42.	5 20% 0	f total cove	,1子(	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30' )				OBL species x 1 =
Sabilità Stratum (Piot size:		V	<b>-</b>	FACW species x 2 =
1. Liquidampar styraciflua		. <del>_ Y</del>	FAC	FAC species x 3 =
2 Acer nibrum	10		FAC	1
3. Prunus Serotina.	5		FALL	FACU species x 4 =
	•		. 1714	UPL species x 5 =
4.				Column Totals: (A) (B)
5				Codiful Totals(A)(B)
6				Orandana Inday - D/A m
	30	= Total Co		Prevalence index = B/A =
	. <u>– 20                                    </u>	= Total Co	ver	Hydrophytic Vegetation Indicators:
50% of total cover: 15	20% c	f total cove	r. <u>(o</u>	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Piot size: 30')				2 - Dominance Test is >50%
1. Asimina triloba	5	У	FAC	2 - Dominance Test is >30%
ASURGE THORE	<u> </u>	· <del>- / -</del>		3 - Prevalence Index is ≤3.01
2 Fogus grandifilia.		. <u> </u>	. FACUL	Problematic Hydrophytic Vegetation¹ (Explain)
3				
4.				1
				Indicators of hydric soil and wetland hydrology must
5				be present, unless disturbed or problematic.
6				Definitions of Five Vegetation Strata:
	10	= Total Co	Wer	
				Tree - Woody plants, excluding woody vines,
50% of total cover:	20% (	of total cove	r. <u>1.04</u>	approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 30'		_		(7.6 cm) or larger in diameter at breast height (DBH).
1. Witis rotundifolia	チ	Y	FAC	Sapling - Woody plants, excluding woody vines,
		V	FACU	approximately 20 ft (6 m) or more in height and less
2. Lonicera japonica				than 3 in. (7.6 cm) DBH.
3. Arthenocissus quinque folia		<u>. Y.</u>	FACU	
4. Microstagium vimineum	3	N	FAC.	Shrub - Woody plants, excluding woody vines,
1,			-	approximately 3 to 20 ft (1 to 6 m) in height.
-				
6				Herb - All herbaceous (non-woody) plants, including
7				herbaceous vines, regardless of size, and woody
				plants, except woody vines, less than approximately
	•	. ——		3 ft (1 m) in height.
9				Woody vine - All woody vines, regardless of height.
10				
11.				
	20	= Total Co		
		-		
50% of total cover:	20%	of total cove	rr. <u> </u>	
Woody Vine Stratum (Plot size: 30'				
1. Longrera janonica	.5	À	FALL	1
2. Smilax rotundifolia	- <del></del>	<del>- //</del>	CAC	
2. SYMILLY POPULICATION			TT-	1
3		. <del></del> _		
4.				
5				Hydrophytic
_		_ = Total Co	. ~	Vegetation Present? Yes No
50% of total cover:	20%	of total cove	r. 1.2	Present? Yes V No
Remarks: (If observed, list morphological adaptations bel				<u> </u>
remarks. In observed, asi morphological adaptations bet	<del>∪π j.</del>			
1				

Profile Description: (Describe to the depth needed to document the indicator or confirm	n the absence of indicators.)
Depth Matrix Redox Features	
(inches) Color (maist) % Color (maist) % Type¹ Loc²	Texture Remarks
0-B 104R411 95 104R 5/8 5	sandy loom
B-20 104K511 45 104K514 5	sandy clay loam
¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
	•
Histosol (A1)	U) 1 cm Muck (A9) (LRR O) 2 cm Muck (A10) (LRR S)
Histo Expedicit (A2)	Reduced Vertic (F18) (outside MLRA 150A,B)
Hydrogen Sulfide (A4)  Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
	Anomalous Bright Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6)	(MLRA 153B)
5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7)	Red Parent Material (TF2)
Muck Presence (A8) (LRR U) Redox Depressions (F8)	Very Shallow Dark Surface (TF12)
1 cm Muck (A9) (LRR P, T) Mari (F10) (LRR U)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)	
Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P,	T) <sup>3</sup> Indicators of hydrophytic vegetation and
Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U)	wetland hydrology must be present.
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)	unless disturbed or problematic.
Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B)	)
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 14	
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLF	RA 149A, 153C, 153D)
Dark Surface (S7) (LRR P, S, T, U)	
Restrictive Layer (if observed):	
Туре:	
Depth (inches):	Hydric Soil Present? Yes No
Remarks:	-
•	
I .	
	,

Project/Site: Centervill	e-Farm Field Ar	ea City/County: C	nesaneake_	Sampling Date: 05/10/11
Applicant/Owner: Tri - Cit			State: VA	
investigator(s): Roth		Section, Township		Company Cont.
Landform (hillslope, terrace, etc.	:_Depression	Local relief (conca	ve, convex. none):Co	(ave slope (%);
Subregion (LRR or MLRA):		3694442	Long: 76° 101 C	Datum:
Soil Map Unit Name:	tie.	/		cation: UPL
Are climatic / hydrologic conditio	as on the cita tunical for this time	- elunar? Vac I		
Are Vegetation, Soil				
		-		
Are Vegetation, Soil	, or Hydrology nature	ally problematic? NO	(If needed, explain any answ	ers in Remarks.)
SUMMARY OF FINDING	S - Attach site map sho	wing sampling poi	nt locations, transects	s, important features, etc.
Hydrophylic Vegetation Present Hydric Soil Present? Wetland Hydrology Present?	Yes No Yes No No Yes No No	within a W	pled Area etland? Yes	No
Remarks:			<u></u>	
HYDROLOGY		·		
Wetland Hydrology Indicator		_		ators (minimum of two required)
	f one is required; check all that a			Cracks (B6)
Surface Water (A1)	Aquatic Faur		·	getated Concave Surface (B8)
High Water Table (A2)	<del></del>	s (B15) (LRR U)		atterns (B10)
Saturation (A3)		ulfide Odor (C1)	Moss Trim I	· ·
Water Marks (B1)	<del></del>	izospheres along Living R	— .	Water Table (C2)
Sediment Deposits (B2) Drift Deposits (B3)	<del></del>	Reduced Iron (C4) Reduction in Tilled Soils (	Crayfish Bu	
Algai Mat or Crust (B4)	Recent from a	Reduction in Tilled Soils ( urface (C7)		risible on Aerial Imagery (C9) : Position (D2)
Iron Deposits (B5)	· · · · · · · · · · · · · · · · · · ·	in in Remarks)	Shallow Aqu	· •
Inundation Visible on Aeria		at in commency	FAC-Neutra	
Water-Stained Leaves (B9	• • • •		<del></del>	moss (D8) (LRR T, U)
Field Observations:	,		<u> </u>	
Surface Water Present?	Yes No Depth (i	inches):		
Water Table Present?		inches): 2"		•
Saturation Present?	_	inches): Surface	Wetland Hydrology Prese	nt? Yes No
(includes capillary fringe)  Describe Recorded Data (streat	am gauge, monitoring well, aeria	I photos, previous inspec	tions), if available:	
Remarks:			<u></u>	400
Remarks.				

VEGETATION (Five Strata) – Use scientific nar	nes of pla	ants.		Sampling Point: D52
20'		Dominan		Dominance Test worksheet:
Tree Stratum (Plot size: 30'		Species'	Status	Number of Dominant Species
	_30	7	FAC	That Are OBL, FACW, or FAC: (A)
2. Liquidambar Styraciflua	<u> 20</u>	<u> </u>	FAC	Total Number of Dominant
3. Uriodendron tulpifera	<u>_20</u>	7	FACU	Species Across All Strata; (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC:  (A/B)
6				That Are OBL, FACW, or FAC: (A/B)
	70	= Total Co		Prevalence Index worksheet:
50% of total cover: 35	200/ -	- i car co	- 14 - 14	Total % Cover of: Multiply by:
30% of total cover. 27:	20% 0	toral cove	. 17	OBL species x 1 =
Sapling Stratum (Plot size: 30'		V		FACW species x 2 =
1. Liquidamber Stymiffua	<u> </u>	<del></del>	TAC	FAC species x 3 =
2. Actr rubrum	15		FAC	FACU species x 4 =
3				
4				UPL species x 5 =
5				Column Totals: (A) (B)
6				Complementation = 1974 =
	30	= Total Co	MAT.	Prevalence Index = B/A =
50% of total cover: 15				Hydrophytic Vegetation Indicators:
	20% 01	total cove	r <b></b>	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30')	=	7	C46	2 - Dominance Test is >50%
1. Asimina triloba	5		EAC	3 - Prevalence Index is ≤3.01
2 Magnolia Virginiana.	<u>_d</u>		FACLU	Problematic Hydrophytic Vegetation¹ (Explain)
3. Vardinium Corymbosum			. FACU	
4				Indicators of hydric soil and wetland hydrology must
5				be present, unless disturbed or problematic.
6				Definitions of Five Vegetation Strata:
	8	= Total Co		and the second second
50% of total cover: 4				Tree - Woody plants, excluding woody vines,
	20% 01	total cove	r. <u>1.10</u>	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30'		V	D. ( )	(7.5 cm) or larger in diameter at breast neight (BBH).
1. Chas monthium laxum			. EXW	Sapling - Woody plants, excluding woody vines,
2 Arundinaria gigantoa	_چ_		<u> FAÇU</u>	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
3. Whortwording artistata	_3_	7	OBL	than 3 in. (7.6 Gil) DBH.
4				Shrub - Woody plants, excluding woody vines,
5				approximately 3 to 20 ft (1 to 6 m) in height.
6.				Herb - All herbaceous (non-woody) plants, including
				herbaceous vines, regardless of size, and woody
7				plants, except woody vines, less than approximately
8				3 ft (1 m) in height.
9				Woody vine - All woody vines, regardless of height.
10				,
11				
	<u> 15 </u>	= Total Co	ver	
50% of total cover: 7.5				
Woody Vine Stratum (Plot size: 30'		_		
1. Berchemia Scandens	5	4	FAC	
2. Euonymus americanus		$\overline{\mathbf{A}}$	<u> </u>	
2 STATISTICS OF THE COUNTY	. ——		. 172	
3.			<del></del>	
4				
5				Hydrophytic
	<u>Le</u>	= Total Co	ver	Vacatation
50% of total cover:	20% of	total cove	r. <u>1.2</u>	Present? Yes No
Remarks: (If observed, list morphological adaptations beld	w).			<u> </u>
	•			

9	a	H	
•	v	н.	

Sampling Point: <u>DS2</u>

Depth	Matrix			Features			<b></b>	
(inches)	Color (moist)		Color (moist)			xture	Remarks	
0-12	TOLKSIT	<u> 100                                  </u>				andy.	<u>vam</u>	
12-a4	164R 4/1	95 k	XR 514	_5	క	ardy.	clay lam	
						·		
¹Type: C=Co	oncentration, D=Dep	letion, RM≃Rec	tuced Matrix, MS	≔Masked Sand Gra	ins. <sup>2</sup> L	ocation:	PL=Pore Lining, M=Matrix.	
Hydric Soli!	ndicators: (Applic	able to all LRR	s, unless other	wise noted.)	ine	dicators f	for Problematic Hydric Solis <sup>3</sup> :	
Histosol	(A1)	_	_ Polyvalue Bel	ow Surface (S8) (LI	RR S, T, U)	_ 1 cm M	uck (A9) (LRR O)	
Histic Ep	ipedon (A2)	_	Thin Dark Su	rface (S9) (LRR S,	T, U)		uck (A10) (LRR S)	
Black His	stic (A3)	_		/ Mineral (F1) (LRR	0)		ed Vertic (F18) (outside MLRA 1	
Hydroge	ก Suifide (A4)	-	Loamy Gleye		_	-	nt Floodplain Soils (F19) (LRR F	P, S, T)
Stratified	Layers (A5)	<b>L</b>	Depleted Mat	rix (F3)	_	-	ous Bright Loamy Soils (F20)	
	Bodies (A6) (LRR P		_ Redox Dark S			-	A 153B)	
5 cm Mu	cky Mineral (A7) (Li	RR P, T, U) _		k Surface (F7)		-	rent Material (TF2)	
<del></del> -	esence (A8) (LRR U	" _	_ Redox Depre				nallow Dark Surface (TF12)	
1 cm Mu	ck (A9) (LRR P, T)	_	_ Marl (F10) (L	·		_ Other (i	Explain in Remarks)	
Depleted	d Below Dark Surfac	e (A11) _		ric (F11) <b>(MLRA 1</b> 5	-	g		
_	irk Surface (A12)	_	_	ese Masses (F12) (L	· · · ·		ators of hydrophytic vegetation a	nd
	rairie Redox (A16) (f	_ · <del></del>	-	ce (F13) (LRR P, T,	, <b>U</b> )		and hydrology must be present,	
	lucky Mineral (S1) (I	LRR O, S) _		(F17) (MLRA 151)		unie	ss disturbed or problematic.	
	Sleyed Matrix (S4)	_		tic (F18) (MLRA 15)				
	Redox (S5)	-	_	odplain Soils (F19)	•	4500	46301	
_ ``	Matrix (S6)		Anomalous B	right Loamy Solls (F	-20) (NILKA 149	IA, 153C,	1530)	
Dark Su	rface (S7) (LRR P, S	s, T, U)						
					<del></del> -			
Restrictive I	Layer (If observed):	:						
Restrictive i			_					
	Layer (If observed):		-		Hyd	dric Soil	Present? Yes Nc_	
Туре:	Layer (If observed):		-		Ну	dric Soil	Present? Yes V No_	
Type: Depth (in	Layer (If observed):		-		Ну	dric Soil	Present? Yes V No	
Type: Depth (in	Layer (If observed):		-		Ну	dric Soli	Present? Yes V No_	
Type: Depth (in	Layer (If observed):		-		Ну	dric Soll	Present? Yes V No_	
Type: Depth (inc	Layer (If observed):		-		Ну	dric Soil	Present? Yes V No_	
Type: Depth (inc	Layer (If observed):		-		Ну	dric Soli	Present? Yes V No _	
Type: Depth (in	Layer (If observed):	-	-		Ну	dric Soll	Present? Yes V No	
Type: Depth (inc	Layer (If observed):		-		Ну	dric Soil	Present? Yes V No	
Type: Depth (inc	Layer (If observed):		-		Hyd	dric Soil	Present? Yes V No	
Type: Depth (inc	Layer (If observed):		-		Hyd	dric Soil	Present? Yes V	
Type: Depth (inc	Layer (If observed):		-		Hyd	dric Soil	Present? Yes V No	
Type: Depth (inc	Layer (If observed):		-		Hyd	dric Soil	Present? Yes V No	
Type: Depth (in	Layer (If observed):		-		Hyd	dric Soil	Present? Yes V No	
Type: Depth (in	Layer (If observed):		-		Hyd	dric Soil	Present? Yes V No	
Type: Depth (in	Layer (If observed):		-		Hyd	dric Soil	Present? Yes V No	
Type: Depth (inc	Layer (If observed):		-		Hy	dric Soil	Present? Yes V No	
Type: Depth (inc	Layer (If observed):		-		Hy	dric Soil	Present? Yes V No	
Type: Depth (inc	Layer (If observed):		-		Hyd	dric Soll	Present? Yes V No	
Type: Depth (inc	Layer (If observed):		-		Hyd	dric Soll	Present? Yes V No	
Type: Depth (in	Layer (If observed):		-		Hyd	dric Soll	Present? Yes V No	
Type: Depth (inc	Layer (If observed):				Hyd	dric Soll	Present? Yes V No	
Type: Depth (in	Layer (If observed):				Hyd	dric Soll	Present? Yes V No	
Type: Depth (in	Layer (If observed):				Hy	dric Soll	Present? Yes V No	
Type: Depth (in	Layer (If observed):				Hyd	dric Soil	Present? Yes V No	
Type: Depth (inc	Layer (If observed):				Hyd	dric Soli	Present? Yes V No	
Type: Depth (in	Layer (If observed):				Hyd	dric Soil	Present? Yes V No	

Project/Site: Centerville	-Form F	Field A	Hisea c	ib/County: Alc	ecane	ve	Sampling Date	05/10/16
Applicant/Owner: TV1-Ci+				myroodiny		State: VA	_	
Investigator(s): Roth	1000 (10	PELLIC	•	Section, Township		State. VET	. Sampling FOII	" <u> </u>
Landform (hillslope, terrace, etc	C) Den	mesinv		ocal relief (concav		nana): Can	covice s	lope (%):
Subregion (LRR or MLRA):		i Cara	Lat: 36° L	CUL LIA!	_	^ ^ 1 .	ß	
_			Lat: 00 C	17 7A	Long: _	76" 10'00		Datum:
Soil Map Unit Name:							cation: LIPI	
Are climatic / hydrologic condition			=					/
Are Vegetation, Soil	, or Hydr	ology	_ significantly d	listurbed? No /	Are "Normal	Circumstances"	present? Yes_	No
Are Vegetation, Soil	, or Hydr	clogy	_ naturally prob	elematic? 🎾 (	If needed, e	explain any answ	ers in Remarks.)	)
SUMMARY OF FINDING	S – Attac	h site ma	p showing :	sampling poi	nt locatio	ons, transects	s, important	features, etc.
Hydrophytic Vegetation Prese	ant? V	es V	No					
Hydric Soil Present?		es V	No	Is the Sam	pled Area		_	
Wetland Hydrology Present?		es 1/	No	within a We	etland?	Yes	No	
Remarks:				<u> </u>				
HADDOLOGA			·				····	
HYDROLOGY			. <del></del>					
Wetland Hydrology Indicato		والمحاج والمحاد	-71.45 -4			Secondary Indic		of two required)
Primary Indicators (minimum	or one is requ		-	<del> </del>			Cracks (B6)	
Surface Water (A1)			itic Fauna (B13)				getated Concav	e Surface (B8)
High Water Table (A2) Saturation (A3)		_	Deposits (B15) ogen Sulfide Od	•		Moss Trim L	ittems (B10)	
Water Marks (B1)			-	res along Living R	note (C3)	_	.mes (BTO) Water Table (C	.21
Sediment Deposits (B2)			ence of Reduce		.0013 (00)	Crayfish But	•	-,
Drift Deposits (B3)		· <del></del>		on in Tilled Soils (	C6)		isible on Aerial	Imagery (C9)
Algal Mat or Crust (B4)			Muck Surface (	•	,		Position (D2)	, (==,
Iron Deposits (B5)		Other	r (Explain in Re	marks)		Shallow Aqu	itard (D3)	
jaundation Visible on Aer	tai Imagery (E	37)				FAC-Neutra	Test (D5)	
Water-Stained Leaves (B	i9)					Sphagnum	moss (D8) (LRR	t, U)
Field Observations:								
Surface Water Present?	Yes							
Water Table Present?	Yes							
Saturation Present? (includes capillary fringe)	Yes	No	Depth (inches):		Wetland H	iydrology Prese	nt? Yes 🔽	No
Describe Recorded Data (stre	am gauge, m	onitoring we	ell, aerial photos	, previous inspect	ions), if ava	ilable:		
Remarks:			-				<del></del>	
								1
								Ī
1								
I								İ

			_	
VEGETATION	(Five Strata)	<ul> <li>Use scientific</li> </ul>	names of	olants.

20'		Dominani		Dominance Test worksheet:
Tree Stratum (Ptot size: 30'		Species		Number of Dominant Species
1. Liquidombor Styrociflua	40		FAC	That Are OBL, FACW, or FAC:(A)
2 Limodendron talipitera	40	7	FACU	Total Number of Dominant
3. Acer rubrum	30	<u>N</u>	FAC	Species Across All Strata: (B)
4. Pinus taeda	10	N	FAC	
5				Percent of Dominant Species That Are OBL, FACW, or FAC:
6.				That Are OBL, FACW, or FAC: (A/B)
	IIA	= Total Co		Prevalence Index worksheet:
S.				Total % Cover of: Multiply by:
50% of total cover: <u>55</u>	<b>2</b> 20% of	rtotal cove	r. <u>aa</u>	OBL species x 1 =
Sapling Stratum (Plot size: 30'		~!		FACW species x 2 =
1. Liquidambar etyraciflua	15		FAC	
2 Act rubrum	<u> 15 </u>	_1_	FAC	FAC species x 3 =
3. Prunus serotina	3_	_N_	FACU	FACU species x 4 =
4.				UPL species x 5 =
5	·			Column Totals: (A) (B)
6			<del></del>	
·	22			Prevalence index = B/A =
17	حدم	= Total Co	ver	Hydrophytic Vegetation Indicators:
50% of total cover: 16.	<b>2</b> 0% of	f total cove	r. <u>6.6</u>	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30')		~1		2 - Dominance Test is >50%
1. Liquidamber Styraciflua	_5_	7	FAC	3 - Prevalence Index is ≤3.01
2 Valedinium Corym bosum	2	7	FACU	Problematic Hydrophytic Vegetation¹ (Explain)
3				Problemate Hydrophytic Vegetation (Explain)
4				
1			. ——	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5				
6				Definitions of Five Vegetation Strata:
		= Total Co		Tree - Woody plants, excluding woody vines,
50% of total cover: 3.5	<u>5</u> 20% o	f total cove	r. 1.4	approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 30'				(7.6 cm) or larger in diameter at breast height (DBH).
1. Arundinaria gigantea	5	Υ	FACU	Sapling - Woody plants, excluding woody vines,
2. Chasmanthium taxum		7	FALL	approximately 20 ft (6 m) or more in height and less
3. Lonicera iamonica	<u> </u>	7	FACU	than 3 in. (7.6 cm) DBH.
4. Osmundes regalis	· ——	<u> </u>	OBL	Church Manda alaska avaludina vanaturia a
( )		1.0	UVL	Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
5			·	approximately of to 20 it (1 to 5 iii) it (10 gitt.
6				Herb - All herbaceous (non-woody) plants, including
7			<del></del>	herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately
8				3 ft (1 m) in height.
9.				
10				Woody vine - All woody vines, regardless of height.
10   11.	·			
'	14	= Total Co		
7				
50% of total cover:	20% o	f total cove	r. 2.6	
Woody Vine Stratum (Plot size: 30'	~	V		
1. Smilax rotunditolia	<u> </u>	<u> </u>	<u>FAC</u>	
2 Vitis rotunditàlia	_5_	<u> </u>	FAC	
3				
4.		-		
5		-		1
	<u></u>	= Total Co		Hydrophytic Vegetation
				Present? Yes No
50% of total cover:		f total cove	r. 1.10	
Remarks: (If observed, list morphological adaptations belo	ow).			
į				

Profile Description: (Describe to the dept	th needed to docum	ent the i	ndicator	or confirm	the absence	of indicator	s.)	
Depth Matrix		K Feature:					B	
(Inches) Color (moist) %	Color (moist)	<u>%</u>	Type'	Loc <sup>2</sup>	Texture	\ <u></u>	Remarks	
0-8 104R3 1 100	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					Joan		
8-24 10XR 5/1 95	104R 5 4	5_			_samy	cron la	$\frac{2m}{}$	
	<del></del>							
¹Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, MS	=Masked	Sand Gr	ains.	<sup>2</sup> Location:	PL=Pore Lin	ing, M≕Matrix	
Hydric Soil Indicators: (Applicable to all					Indicators	for Problem	atic Hydric S	olis³:
Histosol (A1)	Polyvalue Be					fuck (A9) (LF		
Histic Epipedon (A2)	Thin Dark Su			-		łuck (A10) (L	-	1.04.604.50
Black Histic (A3) Hydrogen Sulfide (A4)	Loamy Muck	•		0)	_	-	a) (outside m n Solls (F19) (	LRA 150A,B)
Stratified Layers (A5)	Depleted Mai		.• = /		_	•	.oamy Soils (F	
Organic Bodies (A6) (LRR P, T, U)	Redox Dark	Surface (F	<del>-</del> 6)		(MLI	RA 153B)		
5 cm Mucky Mineral (A7) (LRR P, T, U)			• •			arent Materia		
Muck Presence (A8) (LRR U)	Redox Depre		8)			ihallow Dark (Explain in R	Surface (TF12	2)
1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11)	Mari (F10) <b>(L</b> Depleted Oct	-	(MLRA 1	51)	Outer	(CXPIAIII III IX	ciliaiks)	
Thick Dark Surface (A12)	Iron-Mangan		•		T) <sup>3</sup> India	ators of hydr	ophytic vegeta	ation and
Coast Prairie Redox (A16) (MLRA 150/				, U)		•	gy must be pro	,
Sandy Mucky Mineral (S1) (LRR O, S)	Delta Ochric Reduced Ver			08 4600\		ess disturbed	l or problemati	ic.
Sandy Gleyed Matrix (S4) Sandy Redox (S5)	Piedmont Flo		-					
Stripped Matrix (S6)		•		•	A 149A, 153C	, 153D)		
Dark Surface (S7) (LRR P, S, T, U)								
Restrictive Layer (if observed):								
Туре:							/	
Depth (inches):	<del></del>				Hydric Soll	Present?	Yes	No
Remarks:								
İ								
†								

Project/Site: Centerville - Farm Field Area City/County.	Checopeake Sampling Date: 05/10/16
Applicant/Owner: Tri-Cities Properties LLC	State: VA Sampling Point: DS4
0 44-	mship, Range:
Landform (hillstope, terrace, etc.): Hillstope Local relief (c	concave, convex, none): None Slope (%): O-2
Subregion (LRR or MLRA): LRRT Lat: 36° 44' 42	Long: 76°/0'00" Datum:
Soil Map Unit Name: Certie	NWI classification: LPL
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	
Are Vegetation, Soil, or Hydrology significantly disturbed? A	
Are Vegetation, Soil, or Hydrology naturally problematic?	
SUMMARY OF FINDINGS – Attach site map showing sampling	
Hydrophytic Vegetation Present?  Yes No Is the Hydric Soil Present?	e Sampled Area n a Wetland? Yes No
Deep ditch inmediately adjacent to area	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15) (LRR U)	Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizospheres along Li	
Sediment Deposits (B2)  Presence of Reduced Iron (C4)	Crayfish Burrows (CB)
Drift Deposits (B3) Recent Iron Reduction in Tilled	
Algal Mat or Crust (B4) Thin Muck Surface (C7) Iron Deposits (B5) Other (Explain in Remarks)	Geomorphic Position (D2) Shallow Aquitard (D3)
Inundation Visible on Aerial imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	1
Saturation Present? Yes No Depth (inches):	<del></del>
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous in	nspections), if available:
Remarks:	
Transa.	

1. Smilax rotundifolia 2. Vitis rotundifolia 3. 4. 5. 50% of total cover: 5	_ 20% of	= Total Co	_	Hydrophytic Vegetation Present?  Yes No
2. Vitis rotundifilia 3. 4. 5.			_	1
	5	→ Total Cor	FAC	1
	5	<del>-</del>	FAC	
	5	<del>*</del>	FAC	
	5	7	FAC	
	<u> </u>	7	FAL	
1 - Smalax rationality			1 / W .	1
Woody Vine Stratum (Plot size: 30' )	5	7	FAI	
50% of total cover: 2.5	_ ∠∪% of	total cover	-4-	
500/ 45/46/ 45/46/ 67/46		= Total Co		
11				
10	<del></del>		· <del></del>	
9				Woody vine - All woody vines, regardless of height.
8			· <del></del>	3 ft (1 m) in height.
7				plants, except woody vines, less than approximately
6				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
5				
4				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
3				
2				approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
1. Arundinaria gigantea			rrw	
Herb Stratum (Plot size: 30'	4	J	E041.1	
	20% of	total cover	. <u>. 0</u>	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
50% of total cover:		= Total Co		Tree - Woody plants, excluding woody vines,
6	71-			Definitions of Five Vegetation Strata:
5		-		be present, unless disturbed or problematic.
4				Indicators of hydric soil and wetland hydrology must
3				
2 Asimina triloha	<u> </u>	7	+AC.	Problematic Hydrophytic Vegetation¹ (Explain)
1. Acer rubrum	<u>~</u>	<del>_</del>	FAG	3 - Prevalence index is ≤3.0 <sup>1</sup>
Shrub Stratum (Plot size: 30'	$\overline{}$	7		2 - Dominance Test is >50%
50% of total cover:	_ 20% of	total cove	- <u></u>	1 - Rapid Test for Hydrophytic Vegetation
		= Total Co		Hydrophytic Vegetation Indicators:
6			· ——	Prevalence index = B/A =
5				(A)(B)
4				Column Totals: (A) (B)
3				UPL species x 5 =
2. Aver rubrum	10		FAC	FACU species x 4 =
1. Liquidambar Styrociflua.	10		#AC	FAC species x 3 =
Sapling Stratum (Plot size: 30'	10	7		FACW species x 2 =
50% of total cover: <u>52.</u>	<b>2</b> 0% of	total cover	<u>al</u>	OBL species x 1 =
1		= Total Co		Prevalence Index worksheet: Total % Cover of: Multiply by:
6				Browlenge Index worksheets
5				That Are OBL, FACW, or FAC: 89 (A/B)
4. Acer rubrum	10	<u>~</u>	FAC	Percent of Dominant Species
3. Liquidamhar Styraciflua		_\_\_	FAC	Species Across All Strata; (B)
2 Liriodendron tulipifera	40	7	FACU	Total Number of Dominant
1. Pinus taeda	40	<u>Y</u>	FAC.	That Are OBL, FACW, or FAC: (A)
1 TOO CATALON (1 TOO CIEC.		Species?	Indicator Status	Dominance Test worksheet:
<del></del>	% Cover			Number of Dominant Species

Depth	Matrix		Redo	x Features	or confirm the absence	of indicators.)
(inches)	Color (molst)	<del></del>	Color (moist)	<u>% Type¹</u>	Loc <sup>2</sup> Texture	Remarks
0-8	1048 4/1		OYR 5/B	<u>  5                                  </u>	sand	1
8-20	10YR 5/1	95 1	04R514	5	sandu	clay loam
						<u> </u>
<del></del>						
1T C-C-				0.1411010	2 2	B. B. A. S. Maria
	ncentration, D=Dep ndicators: (Applic	<del></del>				: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils <sup>3</sup> :
Histosol			•	elow Surface (S8) (I		Muck (A9) (LRR O)
	ipedon (A2)			urface (S9) (LRR S,		Muck (A10) (LRR S)
Black His	stic (A3)		Loamy Muck	y Mineral (F1) (LRI	R O) Redu	ced Vertic (F18) (outside MLRA 150A,B)
	n Sulfide (A4)			ed Matrix (F2)	<del></del>	nont Floodplain Soils (F19) (LRR P, S, T)
	l Layers (A5) Bodies (A6) (LRR P	T 11	Depleted Ma			alous Bright Loamy Soils (F20)
	cky Mineral (A7) (LI			Surface (F6) rk Surface (F7)	•	.RA 153B) Parent Material (TF2)
	esence (A8) (LRR L		Redox Depre	· ·		Shallow Dark Surface (TF12)
	ck (A9) (LRR P, T)		Marl (F10) (l			(Explain in Remarks)
	Below Dark Surfac	e (A11)		hric (F11) (MLRA 1	•	
	irk Surface (A12) rairie Redox (A16) (I	MI DA 450A\		nese Masses (F12) ( ace (F13) (LRR P, 1		cators of hydrophytic vegetation and
	lucky Mineral (S1) (I	_		(F17) (MLRA 151)		etland hydrology must be present, less disturbed or problematic.
	leyed Matrix (S4)			rtic (F18) (MLRA 1		
	edox (S5)		Piedmont Fle	oodplain Soils (F19)	(MLRA 149A)	
	Matrix (S6)		Anomalous I	Bright Loamy Soils	(F20) (MLRA 149A, 1530	C, 153D)
	face (S7) (LRR P, s .ayer (if observed)					
Type:	ayar (ii obsorrou)	•				•
Depth (inc	ches):		_		Hydric Sol	I Present? Yes No
Remarks:					1,	

Project/Site: Centervil	_	•			_ Sampling Date: _	
Applicant/Owner: Tri-Cit	<del>ies Proper</del>	tres, LLC	•	_ State: <u>VA</u>	_ Sampling Point: _	<u> 22</u> 2
Investigator(s): Rott	<u> </u>	Sec	tion, Township, Range:			
Landform (hillslope, terrace, et	c): Mound	led Area Loca	al relief (concave, conve	x, none): <u>NOY</u>	)e Stope	e (%): <u>0~2</u>
Subregion (LRR or MLRA):	LRRT	Lat: 3104	4'42" Long:	76'10'00	Dati	um:
Soil Map Unit Name:	rtie			NWI classifi		
Are climatic / hydrologic condit	lions on the site tv	nical for this time of year?	Yes / No		·	
Are Vegetation Soil						A No
Are Vegetation, Soil _						140
SUMMARY OF FINDING	3S – Attach s	site map showing sa	mpling point local	tions, transect	s, important fe	atures, etc.
Hydrophytic Vegetation Pres Hydric Soil Present? Wetland Hydrology Present?	Yes		Is the Sampled Area within a Wetland?		No	•
AREA SURROUN	ed by di	EEP Drehes				
HYDROLOGY		<del></del>				
Wetland Hydrology Indicat	ors:			Secondary Indic	ators (minimum of t	wo required)
Primary Indicators (minimum	of one is required	i; check all that apply)		Surface Soi	il Cracks (B6)	
Surface Water (A1)	-	Aquatic Fauna (B13)		Sparsely Ve	egetated Concave S	iurface (B8)
High Water Table (A2)	-	Marl Deposits (B15) (LI	=	Drainage Pa	atterns (B10)	
Saturation (A3)	-	Hydrogen Sulfide Odor	•	Moss Trim I	Lines (B16)	
Water Marks (B1)	-		along Living Roots (C3)		Water Table (C2)	
Sediment Deposits (B2)	-	Presence of Reduced I	• •	Crayfish Bu	• •	_
Drift Deposits (B3)	-	Recent Iron Reduction		<del></del>	Visible on Aerial Ima	agery (C9)
Algai Mat or Crust (B4)	-	Thin Muck Surface (C7		<del></del>	c Position (D2)	
fron Deposits (B5)	riol Imageny (97)	Other (Explain in Rema	irks)	Shallow Aqu		
Inundation Visible on Ae Water-Stained Leaves (I				FAC-Neutra	moss (D8) (LRR T,	118
Field Observations:				Spriagrum	moss (Do) (LRR 1,	<u> </u>
Surface Water Present?	Yes No	Depth (inches):				
Water Table Present?		Depth (inches):				
Saturation Present?		Depth (inches):		d Hydrology Prese	nt? Yes	No_
(includes capillary fringe)  Describe Recorded Data (str		toring well, aerial photos, p		- <del>-</del> -		
Describe Recorded Data (str	eam gauge, monii	tonng well, aenal photos, p	revious inspections), ir a	ivaliable:		
Remarks:						

VEGETATION (Five Strata) - Use scientific nan	nes of pl	ants.		Sampling Point: 1555
201	Absolute	Dominan	t Indicator	Dominance Test worksheet:
Tree Stratum (Ptot size: 30'		Species	? Status	Number of Dominant Species
1. Liriodendron tulipitoro	<u>(60</u>		FACU	That Are OBL, FACW, or FAC: (A)
2 Pinus tarda	30	7	FAC	Total Number of Dominant
3. Prunus cerotina	ao	N	FACU	Species Across All Strata: (B)
4. Acer rubrum		7	FAC.	
5. Liquidambar Styraciflua	<del>-</del>	14	FAC	Percent of Dominant Species
3. Liquidary II STYTOCI FLUIDS	<u> </u>		170	That Are OBL, FACW, or FAC: 75 (A/B)
6	150			Prevalence Index worksheet:
,		≃ Total Co		Total % Cover of:Multiply by:
50% of total cover:	<u> </u>	f total cove	n: <u>274</u>	
Sapling Stratum (Plot size: 30' )		.,		OBL species x 1 =
1. Acer rubrum	10	Y	FAG	FACW species x 2 =
2 Liquidomhor styraciflua	<u>a</u>	N		FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals:(A)(B)
5				County Totals(C)
6				Prevalence Index = B/A =
	_4_	= Total Co	ver	Hydrophytic Vegetation Indicators:
50% of total cover:	20% o	f total cove	12.4	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Piot size: 30' )				<u>,                                     </u>
1. Asimina triloha	<b>1</b>	4	FAC	2 - Dominance Test is >50%
			TAG	3 - Prevalence Index is ≤3.0'
2				Problematic Hydrophytic Vegetation¹ (Explain)
3				
4				¹Indicators of hydric soil and wetland hydrology must
5				be present, unless disturbed or problematic.
6.				Definitions of Five Vegetation Strata:
	$\overline{a}$	= Total Co		
50% of total cover:		•		Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
	20% 0	I LOCAL COVE	i. <u>• 1</u>	(7.6 cm) or larger in diameter at breast height (DBH).
Herb Stratum (Plot size: 30'	7.0	<b>Y</b>	Excul	(
1. Lonicera japonica	<u> </u>	· <del>- [</del> -	- EXTT	Sapling – Woody plants, excluding woody vines,
2 Microstalum Vimineum	<u>00</u>	_ <u>_Y_</u>	FAC	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
3. Parthenocissus auroque folia	<u> </u>	. <u>-N</u> .	<u> FACU</u>	than 3 m. (7.8 cm) DBn.
4. Chasmanthium laxam	_12_	<u>N</u>	- FACLL)	Shrub - Woody plants, excluding woody vines,
5.				approximately 3 to 20 ft (1 to 6 m) in height.
6				Herb - All herbaceous (non-woody) plants, including
7				herbaceous vines, regardless of size, and woody
	-			plants, except woody vines, less than approximately
0	-			3 ft (1 m) in height.
9				Woody vine - All woody vines, regardless of height.
10				The state of the s
11				
	47	= Total Co	over ,	
50% of total cover: 23.	5 20% 0	f total cove	er: 94	
Woody Vine Stratum (Plot size: 30')				
1. Smilax rotundifolio	3	Y	EAS	
	<del></del>	4		
2 Vitis rotunditation				
3				
4				
5				Hydrophytic
	4	= Total C	over	Vegetation
50% of total cover:2	20% c	of total cove	er. <u>. 8</u>	Present? Yes V No
Remarks: (If observed, list morphological adaptations belo				1
, , , , , , , , , , , , , , , , , , , ,	•			

SOIL								Sa	mpling Point:	DS5_
Profile Desc	ription: (Describe	to the dep	th needed to docu	ment the li	ndicator or	confirm t	the absence	of indicator	s.)	
Depth	<u>Matrix</u>			ox Features	<u> </u>	<del>. 3</del>			_	
(inches)	Color (moist)	<u> </u>	Color (moist)		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	1	Remarks	
0-12	1048 3/1	100					sandy	loan		
12-24	104R 5/1	95	104R 5/4	_ <u>5</u> _			Sandy	clay lo		
			<u> </u>							
	<del></del>									
			· · · · · · · · · · · · · · · · · · ·							
1- 00		<del></del>					2			
	oncentration, D=Dep ndicators: (Applic					ıs.			ing, M≕Matri atle Hydric ∜	
Histosol		anie io ali				9 C T III			<del>-</del>	ouis .
	ipedon (A2)		Polyvalue B Thin Dark S					łuck (A9) (Li łuck (A10) (I		
Black His			Loamy Muc							1LRA 150A,B)
	n Sulfide (A4)		Loamy Gley			,				(LRR P, S, T)
Stratified	Layers (A5)		Depleted M	atrix (F3)			Anoma	ious Bright L	oamy Soils (	F20)
	Bodies (A6) (LRR P		Redox Dark	Surface (F	6)		(M LF	RA 153B)		
	cky Mineral (A7) (Lf							arent Materia	• •	
	esence (A8) (LRR U	)	Redox Depr		3)				Surface (TF1	2)
	ck (A9) (LRR P, T)		Marl (F10) (	-			Other (	Explain in R	emarks)	
	Below Dark Surfac	e (A11)	Depleted O				- 3 <sub>1</sub>			
	rk Surface (A12)	31 DA 4504	Iron-Mangai					-	ophytic veget	
	airie Redox (A16) (N lucky Mineral (S1) (I		A) Umbric Surf Delta Ochric			*)		-	gy must be pr I or problemat	
	leyed Matrix (S4)		Reduced Ve			. 150B)	a) ik	aa dialdi bec	i di problema	uo.
	edox (S5)		Piedmont Fi				A)			
	Matrix (S6)						149A, 153C	153D)		
Dark Sur	face (S7) (LRR P, S	S, T, U)	_	J	•	•	•	•		
Restrictive L	.ayer (if observed):					T I				
Туре:		<i></i>	<u> </u>			-			,	
Depth (inc	thes):						Hydric Soil	Present?	Yes/_	No
Remarks:								<del></del>		

Project/Site: Centervil	le-Farm Fo	eld Area city/o	County: Chesape	ake	_ Sampling Date: _	05/10/11
Applicant/Owner: Th-Citre					Sampling Point:	
Investigator(s): Roth			on, Township, Range:		-	
Landform (hillslope, terrace, etc.)	Flat		relief (concave, convex		AP Sion	e (%): 🗘
Subregion (LRR or MLRA):		Lat: 36°41	」 Uつ "	76°10'0		
		_ Lar <u></u>	T TA LONG:			tum:
Soil Map Unit Name:		· · · · · · · · · · · · · · · · · · ·	<u> </u>		ication: <u>UPL</u>	
Are climatic / hydrologic condition	•	-				•
Are Vegetation, Soil	, or Hydrology	_ significantly distu	rbed? 🖊 Are "Norma	el Circumstances*	present? Yes 🗸	No
Are Vegetztion, Soil	, or Hydrology	_ naturally problem	atic? No (If needed,	explain any answ	ers in Remarks.)	
SUMMARY OF FINDINGS	i – Attach site ma	ıp showing san	npling point locati	ons, transect	s, important fe	atures, etc.
Hydrophytic Vegetation Present Hydric Soil Present? Wetland Hydrology Present? Remarks:	Is the Sampled Area within a Wetland?	Yes	No	_		
HYDROLOGY						
Wetland Hydrology Indicators				Secondary Indic	ators (minimum of	two required)
Primary Indicators (minimum of	·	· · · · · · · · · · · · · · · · · · ·		Surface Soil Cracks (B6)		
Surface Water (A1)	Aqua	atic Fauna (B13)		Sparsely Ve	egetated Concave :	Surface (B8)
High Water Table (A2)		Deposits (B15) (LR	•		atterns (B10)	
Saturation (A3)		ogen Sulfide Odor (	•	Moss Trim	•	
Water Marks (B1)	<del></del>		along Living Roots (C3)		Water Table (C2)	
Sediment Deposits (B2) Drift Deposits (B3)		ence of Reduced in	• •	Crayfish Bu	• •	
Algal Mat or Crust (B4)	n Tilled Soils (C6)		√isible on Aerial Im c Position (D2)	agery (Cs)		
Iron Deposits (B5)	<del></del>	Muck Surface (C7) er (Explain in Reman	ke)	Shallow Aq		
Inundation Visible on Aeria		(Explain in Home)	NO <sub>1</sub>	FAC-Neutra		
Water-Stained Leaves (B9)	•				moss (D8) (LRR T	.us
Field Observations:						
Surface Water Present?	Yes No	Depth (inches):				
	Yes No					
	,	Depth (inches):		Hydrology Prese	ent? Yes 🔽	No
Describe Recorded Data (stream	m gauge, monitoring w	ell, aerial photos, pre	evious inspections), if av	railable:		
Remarks:						
						ļ
1						

30'		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species		Number of Dominant Species That Are OBL FACW or FAC (A)
1. Pinus taeda.	40		FAC	That Are OBL, FACW, or FAC: (A)
	<u> </u>		EACL	Total Number of Dominant
	5		FAC	Species Across Ali Strata: 12 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				
	75	= Total Co	ver	Prevalence Index worksheet:
50% of total cover: 37	5 20% 0	f total cove	r 15	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30' )			·	OBL species x 1 =
1. Acer rubcum	15	Y	FAC	FACW species x 2 =
2. Liquidambar styraciflua	<del>- 12</del> -	<del>\</del>		FAC species x 3 =
2 Libratord Stylar Asso	<del>- 15</del>			FACU species x 4 =
3. Lithodendron tullpitera			Mu	UPL species x 5 =
4				Column Totals: (A) (B)
5				Cudifiti Totals(A)
6				Prevalence Index = B/A =
	35	= Total Co	ver	Hydrophytic Vegetation indicators:
50% of total cover: 17.	5 20% o	f total cove	r. 7	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30'				2 - Dominance Test is >50%
1 Acer ribain	.3	Y	FAC	2 - Dominance Test is >50%
1. Acer rubrum 2. Vaccinium Corymbosum	3	4	FACLO	3 - Prevalence Index is ≤3.0¹
2. Vaccimum corginoasurvi			الكلكارا	Problematic Hydrophytic Vegetation¹ (Explain)
3			· ——	
4				Indicators of hydric soil and wetland hydrology must
5				be present, unless disturbed or problematic.
6				Definitions of Five Vegetation Strata:
		= Total Co		Tree – Woody plants, excluding woody vines,
50% of total cover: 2.5	<u>5</u> 20% o	f total cove	r:	approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 30'	_			(7.6 cm) or larger in diameter at breast height (DBH).
1. Woodwardia areolata	.3	Y	OBL	Sapling Woody plants, excluding woody vines,
2. Dioscorea villosa	2	Ÿ	FACL)	approximately 20 ft (6 m) or more in height and less
3. Chasmanthium Taxum	3	Ÿ	FACL	than 3 in. (7.6 cm) DBH.
4. Clethra alnifolia	<u> </u>	Ÿ	FACL	Shrub – Woody plants, excluding woody vines,
5. Osmunda regalis		<del>\</del>	OBL	approximately 3 to 20 ft (1 to 6 m) in height.
<b>J</b> -				
6.				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
7				plants, except woody vines, less than approximately
8		·		3 ft (1 m) in height.
9			. ——	Minade idea All was de idea anno anno al bairbh
10				Woody vine - All woody vines, regardless of height.
11				
	_/0	= Total Co	ver	
50% of total cover:	20% 0	If total cove	r. 2	
Woody Vine Stratum (Plot size: 30')			··· <u></u>	
1. Berchemia, Standens	3	Y	FAC	
2. Vitis rotundifolia	<del></del>	7	FAC	
3.	. <u> </u>		. ##	
3			<del></del>	
4				
5				Hydrophytic
		.≃ Total Co	_	Vegetation   Present?   Yes   No
50% of total cover: 2.5	<u> </u>	f total cove	r:	Liegetiti (a2 A MA
Remarks: (If observed, list morphological adaptations believed)	ow).			<u> </u>

	••		
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Sampling Point: DSLo

Profile Des	cription: (Describe	to the depth	needed to docum	ent the indicator	or confirm th	e absence	of indicator	's.)	
Depth	Matrix		Redo	r Features					
(inches)	Color (maist)	<u>%</u>	Color (moist)	% Type¹	Loc <sup>2</sup>	Texture		Remarks	
0-8	104R311	100				Sanda	Loan	_	
A-71	104R511		07R 514	6				an_	
D 27	TOIKSII		O IV SI	<del></del>		Sandy	and to	Gr. \	. — — —
ā									
								-	
			<del></del>	<del></del>					
¹Type: C=C	concentration, D≃De	pletion RM≕R	Reduced Matrix MS	=Masked Sand Gra	ains	<sup>2</sup> Location	PI =Pore I in	ning, M≃Matrix	
	Indicators: (Appli				<u> </u>			atic Hydric S	
Histoso			•	low Surface (S8) (L	RRS T III		uck (A9) (LI	=	
_	pipedon (A2)			rface (S9) (LRR S,		_	uck (A10) (1	•	
I —	istic (A3)			/ Mineral (F1) (LRR				8) (outside M	IRA 150A RV
_	en Sulfide (A4)		Loamy Gleye		. 0,			in Soils (F19) (	
	d Layers (A5)		Depleted Mat				-	oamy Soils (F	
	Bodies (A6) (LRR I	P. T. U)	Redox Dark S	• •			A 153B)		,
1 —	ucky Mineral (A7) (L		_	k Surface (F7)		•	rent Materia	ıl (TF2)	
	resence (A8) (LRR I		Redox Depre					Surface (TF12	9)
1	uck (A9) (LRR P, T)		Marl (F10) (L				Explain in R	•	,
1	d Below Dark Surface			nic (F11) (MLRA 1	51)	· ·	•	•	
Thick D	ark Surface (A12)	•	iron-Mangane	ese Masses (F12) (	LRR O, P, T)	3Indic	ators of hydr	ophytic vegeta	ation and
Coast F	Prairie Redox (A16) (	MLRA 150A)	Umbric Surfa	ce (F13) (LRR P, T	່, ປ)	wetl	and hydrolo	gy must be pre	sent,
Sandy i	Mucky Mineral (S1)	(LRR O, S)	Delta Ochric	(F17) (MLRA 151)		unte	ss disturbed	or problemati	c.
Sandy (	Gleyed Matrix (S4)		Reduced Ver	tic (F18) (MLRA 15	0A, 150B)				
	Redox (S5)		Piedmont Flo	odplain Soils (F19)	(MLRA 149A	L)			
Stripped	d Matrix (S6)		Anomalous B	right Loamy Soils (I	F20) (MLRA	149A, 153C,	153D)		
Dark Su	ırface (\$7) (LRR P,	S, T, U)							
Restrictive	Layer (If observed)	):			Ŧ				
Туре:			_		1				
Depth (in	iches):				1.	Hydric Soil	Present?	Yes i	No
Remarks:			<del>-</del>		L				
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## WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Centervill	e-Farm Field Area cityl	County: Chesapea	ike	Sampling Date:	5/10/16
Applicant/Owner: TV:-Citi	es Proporties, LLC	· · · · · · · · · · · · · · · · · · ·	State: VA	Sampling Point:	DS7
Investigator(s): Roth	•	on, Township, Range:			
	:): Mounded Area Local	relief (concave, convex.	none): _\JoY	Slope	(%): 0-2
Subregion (LRR or MLRA):	-RRT Lat 36844	1' 42" Long:	760 10'0	O <sup>ll</sup> Datur	n:
Soil Map Unit Name:	. •			ation: UPL	
		4 / N-			
	ons on the site typical for this time of year?				
	, or Hydrology significantly distu				No
Are Vegetation, Soil	, or Hydrology naturally problem	atic? No (If needed, o	explain any answe	rs in Remarks.)	
SUMMARY OF FINDING	S - Attach site map showing sar	npling point location	ons, transects	, important fea	tures, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present? Remarks:	Yes No Yes No Yes No	Is the Sampled Area within a Wetland?	Yes	No <u>/</u> _	
Deep ditches	in Vicinity of STATION	<b>√.</b>			
HYDROLOGY					
Wetland Hydrology Indicato	rs:		Secondary Indica	ators (minimum of tw	o required)
Primary Indicators (minimum	of one is required; check all that apply)	<del></del>	Surface Soil	Cracks (B6)	
Surface Water (A1)	Aquatic Fauna (B13)		Sparsely Ve	getated Concave Su	rrface (B8)
High Water Table (A2)	Marl Deposits (B15) (LR	RU)	Drainage Pa	tterns (B10)	
Saturation (A3)	Hydrogen Suffide Odor (	(C1)	Moss Trim L	ines (B16)	
Water Marks (B1)	Oxidized Rhizospheres	aiong Living Roots (C3)	Dry-Season	Water Table (C2)	
Sediment Deposits (B2)	Presence of Reduced In		Crayfish Bur	· · · · · · · · · · · · · · · · · · ·	
Drift Deposits (B3)	Recent Iron Reduction in	•		isible on Aerial Imag	gery (C9)
Algal Mat or Crust (B4)	Thin Muck Surface (C7)			Position (D2)	
Iron Deposits (B5)	Other (Explain in Remar	TKS)	Shallow Aqu		
Inundation Visible on Aer	• • • •		FAC-Neutral	noss (D8) (LRR T, U	n
Water-Stained Leaves (B Field Observations:	3)		Spriagnum	11055 (DO) (LRR 1, C	וי
Surface Water Present?	Yes No Depth (inches):				
Water Table Present?	——————————————————————————————————————		Uudralaau Dassa	nt? Voe	No V
Saturation Present? (includes capillary fringe)	Yes No V Depth (inches):	Wetland	Hydrology Prese	ntr res	NO
Describe Recorded Data (stre	eam gauge, monitoring well, aerial photos, pr	evious inspections), if av	ailable:	•	
Remarks:					
İ					

	Abeduta	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30'		Species?		
				Number of Dominant Species
1. Liviodendron tulipitera			FACU	That Are OBL, FACW, or FAC: (A)
2. Pinus tarda	40	~	FAC	
3. Liquidambor styraciflua		-		Total Number of Dominant
3. Liquidamini Stylapitua.		72	FAC	Species Across All Strata: (B)
4.				
				Percent of Dominant Species
5	. <del> </del>			That Are OBL, FACW, or FAC:(A/B)
6				\
	0.5	= Total Co		Prevalence Index worksheet:
	_13	= local Co	ver	Tabal 0/ Carras of Multimbe bus
50% of total cover: 47.	5 20% 0	f total cover	. 19	Total % Cover of: Multiply by:
				OBL species x 1 =
Sapling Stratum (Plot size: 30'	. —	×1		FACW species x 2 =
1. Liquidambar styraciflua.	15_		FAG	
2 Lindendron tulipiera	10	7	EACL	FAC species x 3 =
2 Minute Mills I dill pint a				FACU species x 4 =
3				
4.				UPL species x 5 =
1				Column Totals: (A) (B)
5				Countri Totals (A) (B)
6				,
	7.			Prevalence index = B/A =
	<u>d5</u>	= Total Co	ver	Hydrophytic Vegetation Indicators:
50% of total cover: 12.	5 2004 ^	f total cover	- 5	1
30% of total cover. 1971.	20%0	I LOUB! COVE	. <u> </u>	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30')				2 - Dominance Test is >50%
1. Acer rubrum	D D	7	FAC	
		•		3 - Prevalence Index is ≤3.01
2	· ———			Problematic Hydrophytic Vegetation¹ (Explain)
3				
4				Indicators of hydric soil and wetland hydrology must
5				be present, unless disturbed or problematic.
	• ——			
6				Definitions of Five Vegetation Strata:
İ	2	= Total Co	ver .	]
500/ -41-1-1 /				Tree - Woody plants, excluding woody vines,
50% of total cover:	20% 6	total cove	· <u> </u>	approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 30'				(7.6 cm) or larger in diameter at breast height (DBH).
1. Arundinaria giognita	10	¥	EACL 1	
			EACL	Sapling - Woody plants, excluding woody vines,
2. Parathelypteris rovehoracensis	_ ح		EAC	approximately 20 ft (6 m) or more in height and less
3. Parthenocissus quinquefolia		~~	TACU	than 3 in. (7.6 cm) DBH.
3. Fair her hours of sour hour follows		~	1/2/	
	_چ_	<del></del>		
4. Toxicodendron radicans	_3_	_X_	FAC	Shrub - Woody plants, excluding woody vines,
4. Toxicodendron radicans	_3_	N N		Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
4. Toxicodendron radicans	3	<u> </u>		
4. Toxicodendron radicans	3			
4. Toxicodendron radicans 5 6	3			approximately 3 to 20 ft (1 to 6 m) in height.
4. Toxicodendron radicans 5 6 7	3_			approximately 3 to 20 ft (1 to 6 m) in height.  Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
4. Toxicodendron radicans 5 6 7	3_			approximately 3 to 20 ft (1 to 6 m) in height.  Herb — All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
4. Toxicodendron radicans 5. 6. 7. 8.	3_			approximately 3 to 20 ft (1 to 6 m) in height.  Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
4. Toxicodendron radicans 5 6 7 8 9	3_			approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
4. Toxicodendron radicans 5. 6. 7. 8.	3_			approximately 3 to 20 ft (1 to 6 m) in height.  Herb — All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately
4. Toxicodendron radicans 5 6 7 8 9 10	3_			approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
4. Toxicodendron radicans 5 6 7 8 9	3			approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
4. Toxicodendron radicans 5 6 7 8 9 10 11	3	= Total Co	ver	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
4. Toxicodendron radicans 5 6 7 8 9 10 11	3	= Total Co	ver	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
4. Toxicodendron Fadicans 5 6 7 8 9 10 11 50% of total cover: 11.6	3	= Total Co	ver	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
4. Toxicodendron Fadicans 5	3	= Total Co	ver	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
4. Toxicodendron Fadicans 5	3	= Total Co	ver	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
4. Toxicodendron Vadicans  5	3	= Total Co	ver	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
4. Toxicodendron Fadicans 5	3	= Total Co	ver	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
4. Toxicodendron Vadicans  5	3	= Total Co	ver	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
4. Toxicodendron Vadicans  5	3	= Total Co	ver	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
4. Toxicodendron Vadicans  5	3	= Total Co	ver	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
4. Toxicodendron Vadicans  5	3 23 5 20% o	= Total Co	ver	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.
4. Toxicodendron Vadicans  5	3 23 5 20% o	= Total Co f total cove	ver 4.6 FAC	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic
4. Toxicodendron radicans 5. 6. 7. 8. 9. 10. 11.  Som of total cover: 11.5  Woody Vine Stratum (Plot size: 30') 1. Vitas rotundifolia 2. Gelsemium sempervirens 3. 4. 5.	3 23 5 20% o	= Total Co f total cove	PAC FAC	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic
4. Toxicodendron Vadicans  5	3 23 5 20% o	= Total Co f total cove	PAC FAC	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic
4. Toxicodendron radicans 5. 6. 7. 8. 9. 10. 11.  Som of total cover: 11.5  Woody Vine Stratum (Plot size: 30') 1. Vitis rotendifolia 2. Gelsemium sempervirens 3. 4. 5.	23 20% o	= Total Co f total cove	PAC FAC	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic
4. Toxicodendron radicans 5. 6. 7. 8. 9. 10. 11.  Som of total cover: 11.5  Woody Vine Stratum (Plot size: 30') 1. Vitas rotundifolia 2. Gelsemium sempervirens 3. 4. 5.	23 20% o	= Total Co f total cove	PAC FAC	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic
4. Toxicodendron radicans 5. 6. 7. 8. 9. 10. 11.  Som of total cover: 11.5  Woody Vine Stratum (Plot size: 30') 1. Vitis rotendifolia 2. Gelsemium sempervirens 3. 4. 5.	23 20% o	= Total Co f total cove	PAC FAC	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic
4. Toxicodendron radicans 5. 6. 7. 8. 9. 10. 11.  Som of total cover: 11.5  Woody Vine Stratum (Plot size: 30') 1. Vitis rotendifolia 2. Gelsemium sempervirens 3. 4. 5.	23 20% o	= Total Co f total cove	PAC FAC	approximately 3 to 20 ft (1 to 6 m) in height.  Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody vine – All woody vines, regardless of height.  Hydrophytic

Profile Desc	ription: (Describe	to the dept	h needed to docur	nent the l	Indicator	or confirm	the absence	of indicators.)
Depth	Matrix			x Feature	s	1 2	T	Domonico
(inches)	Color (moist)	· <u>%</u> -	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-12	10YR 311	100					Sandy	loan
12.24	104R 5/1	95	104R 5 4	_5_			sandy	day loam
	•						)	7
ļ <del></del>	•	·						
¹Type: C=C	oncentration, D=Der	etion, RM=	Reduced Matrix, M	S=Maske	d Sand Gr	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soll	Indicators: (Applic	able to all l	RRs, unless othe	rwise not	ed.)		Indicators	for Problematic Hydric Solis <sup>3</sup> :
Histosol	(A1)		Polyvalue Be	low Surfa	ice (S8) (L	.RR S, T, U	l) 1 cm f	Muck (A9) (LRR O)
Histic E	pipedon (A2)		Thin Dark Su	ırface (S9	) (LRR S,	T, U)	2 cm i	Muck (A10) (LRR S)
-	istic (A3)		Loamy Muck	-		(O)	_	ced Vertic (F18) (outside MLRA 150A,B)
	en Sulfide (A4)		Loamy Gleye		(F2)		_	nont Floodplain Soils (F19) (LRR P, S, T)
1	d Layers (A5)		Depleted Ma	• .	F0\		_	alous Bright Loarny Soils (F20)  RA 153B)
1 —	Bodies (A6) (LRR F ucky Mineral (A7) (L		Redox Dark Depleted Da	-	-		•	Parent Material (TF2)
, —	resence (A8) (LRR U		Redox Depre		•		_	Shallow Dark Surface (TF12)
	ick (A9) (LRR P, T)	•,	Mari (F10) (L	,	Ο,			(Explain in Remarks)
	d Below Dark Surfac	e (A11)	Depleted Oc		(MLRA 1	51) -		
Thick D	ark Surface (A12)		Iron-Mangan	ese Mass	es (F12) (	LRR O, P,	T) <sup>3</sup> indi	cators of hydrophytic vegetation and
Coast P	rairle Redox (A16) (	MLRA 150A	) Umbric Surfa	ace (F13)	(LRR P, T	', U)		tland hydrology must be present,
1 —	Mucky Mineral (S1) (	LRR O, S)	Delta Ochric					less disturbed or problematic.
1 —	Sleyed Matrix (S4)		Reduced Ve					
	Redox (S5) I Matrix (S6)		Piedmont Fig	-		-	A 149A, 1530	: 153D)
	rface (S7) (LRR P.	S. T. U1		Jigin Lou	any 0000 (	20) (MEN	J. 140M, 1004	, 1000,
	Layer (if observed)						T	
Type:	• •							•
· · · —	ches):						Hydric Soi	Present? Yes 1 No
Remarks:							1	
110111011101								
1								

## WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Centerville-Farm Field Area, City/County: C	
Applicant/Owner: TVi-Cities Properties, LLC	State: <u>VA</u> Sampling Point: <u>DS</u>
• • • • • • • • • • • • • • • • • • • •	, Range:
Landform (hillslope, terrace, etc.): Local relief (concav	ve, convex. none): None. Slope (%): 0 - 2
Subregion (LRR or MLRA): LRRT Lat: 316 44' 42"	Long: 710° 10' 00' Datum:
Soil Map Unit Name: Certic	NWI classification: UPL
Are climatic / hydrologic conditions on the site typical for this time of year? Yes N	
Are Vegetation, Soil, or Hydrology significantly disturbed? \( \infty \) A	
Are Vegetation, Soil, or Hydrology naturally problematic? No (	If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling poir	nt locations, transects, important features, etc.
Hydrophylic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Remarks:  Yes No  Is the Samp within a Wetland Hydrology Present?  Remarks:	
Deep ditches on two sides of this up	and area.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Mart Deposits (B15) (LRR U)	Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizospheres along Living R	· · · — · · · · · · · · · · · · · · · ·
Sediment Deposits (B2) Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (	
Algal Mat or Crust (B4) Thin Muck Surface (C7) (ron Deposits (B5) Other (Explain in Remarks)	Geomorphic Position (D2) Shallow Aquitard (D3)
fron Deposits (B5) Other (Explain in Remarks)   Inundation Visible on Aerial Imagery (B7)	Shahow Aquitard (D5) FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No/ Depth (inches):	
Saturation Present? Yes No Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	tions), if available:
Remarks:	

<b>VEGETATION</b>	Five Strata	- Use scientific	names of p	lants
		, coc color rano	mannes on p	

Sampling Point: <u>DSB</u>

30'		Dominant		Dominance Test worksheet:	
Tree Stratum (Plot size: 30')	<sup>% Cover</sup>	Species?		Number of Dominant Species That Are ORL FACW or FAC: (A)	
1. Liriodendron tulipitera		<del></del>	EALL	That Are OBL, FACW, or FAC: (A)	,
2 Pinus taeda	- <del>40</del>		FAC	Total Number of Dominant	
3. Liquidamber Styraciflua.	<u> 40</u>	<del>-</del> <del>\</del>		Species Across All Strata: (B)	)
4	- ——			Percent of Dominant Species	
5				That Are OBL, FACW, or FAC: 86 (A	/B)
6					
		= Total Co		Prevalence Index worksheet:	
50% of total cover: <u>50</u>	20% of	f total cover	:20_	Total % Cover of: Multiply by:	
Sapling Stratum (Plot size: 30')				OBL species x1 =	
1. Acer rubrum	15	Y	EAC	FACW species x 2 =	
2 Liguidambar styraciflua	15	7	FAC.	FAC species x 3 =	
3. Ourrus michauxii			FACU	FACU species x 4 =	
[ -1				UPL species x 5 =	
4.				Column Totals: (A) (I	В)
5					
6	7=			Prevalence Index = B/A =	
100		= Total Co		Hydrophytic Vegetation Indicators:	
50% of total cover: <u>/ 7.</u>	<u>5</u> 20% o	f total cover	- <u>+</u>	1 - Rapid Test for Hydrophytic Vegetation	
Shrub Stratum (Plot size: 30'				2 - Dominance Test is >50%	
1,				3 - Prevalence Index is ≤3.01	
2				Problematic Hydrophytic Vegetation¹ (Explain)	
3					
4.				¹Indicators of hydric soil and wetland hydrology must	ŧ
5.				be present, unless disturbed or problematic.	•
6.			•	Definitions of Five Vegetation Strata:	
	$\overline{}$	= Total Co	Ver	_	
50% of total cover:			_	Tree - Woody plants, excluding woody vines,	
Herb Stratum (Plot size: 30'	20%0	I total cove	. <u> </u>	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH)	i.
Herb Stratum (Plot size: 00		7	Tari	1	•
1. Arundinaria gigantea	_ <del></del> _		FACL	Sapling – Woody plants, excluding woody vines,	
2 Tupularia, discolor				approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.	
3					
4.				Shrub - Woody plants, excluding woody vines,	
5				approximately 3 to 20 ft (1 to 6 m) in height.	
6				Herb - All herbaceous (non-woody) plants, including	3
7				herbaceous vines, regardless of size, and woody	
8				plants, except woody vines, less than approximately 3 ft (1 m) in height.	
9.				July 111 Jul	
10				Woody vine - All woody vines, regardless of height	
11.	-				
	7-	= Total Co			_
5004 -54-1-4		•	-		
50% of total cover:	20% 0	f total cove	[: <u>1.0</u>		
Woody Vine Stratum (Plot size: 30')	-	V			
1. Vitis rotundifolia			سكالكتك		
2				†	
3			<del> </del>		
4					
5				Hydrophytic	
	_3	= Total Co	ver	Vegetation	
50% of total cover:	5 20% 0	f total cove	rlo	Present? Yes No	
Remarks: (If observed, list morphological adaptations be				1.	
The second of the second secon					

Sampling Point: DS	SA	
--------------------	----	--

•	п	B	

Profile Description: (Describe to the depti	needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (maist) %	Color (maist) % Type <sup>1</sup> Loc <sup>2</sup>	Texture Remarks
0-12 LOYR 311 100		Sandy loan
12-24 104R511 95	104R 5/4 5	Santy clay loan
<u> </u>		
<u> </u>		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=		<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soll Indicators: (Applicable to all L		indicators for Problematic Hydric Solis <sup>3</sup> :
Histosol (A1)	Polyvalue Below Surface (S8) (LRR S, T, U)	
Histic Epipedon (A2)	Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)
Black Histic (A3)	Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T) Anomalous Bright Loamy Soils (F20)
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U)	Depleted Matrix (F3) Redox Dark Surface (F6)	(MLRA 153B)
5 cm Mucky Mineral (A7) (LRR P, T, U)	Depleted Dark Surface (F7)	Red Parent Material (TF2)
Muck Presence (A8) (LRR U)	Redox Depressions (F8)	Very Shallow Dark Surface (TF12)
1 cm Muck (A9) (LRR P, T)	Mari (F10) (LRR U)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Ochric (F11) (MLRA 151)	
Thick Dark Surface (A12)	Iron-Manganese Masses (F12) (LRR O, P,	T) <sup>3</sup> Indicators of hydrophytic vegetation and
Coast Prairie Redox (A16) (MLRA 150A	Umbric Surface (F13) (LRR P, T, U)	wetland hydrology must be present,
Sandy Mucky Mineral (S1) (LRR O, S)	Delta Ochric (F17) (MLRA 151)	unless disturbed or problematic.
Sandy Gleyed Matrix (S4)	Reduced Vertic (F18) (MLRA 150A, 150B)	
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 149	·
Stripped Matrix (S6)	Anomalous Bright Loamy Solls (F20) (MLR/	A 149A, 153C, 153D)
Dark Surface (S7) (LRR P, S, T, U)		
Restrictive Layer (If observed):		
Туре:	<del></del>	
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		

## WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Centery	ile-Fo	um Field	Aven city	County C.V	ንድ ሂብ ነገድብ	Ke.	Sampling Date:	05/10/114
Applicant/Owner: Tri-Ci						State: VA		
Investigator(s): Rott		ique us	•	tion, Township			Sempling Forth.	40
Landform (hillslope, terrace, e		202154-10		•	• •			
Subregion (LRR or MLRA): 1			Lat <u>36°4</u> '	<u>4 42 </u>	Long: _			um:
Soil Map Unit Name:							ation: LIPL	
Are climatic / hydrologic condi	tions on the	site typical for	this time of year?	Yes V	ło	(If no, explain in R	emarks.)	
Are Vegetation, Soil _	, or H	ydrology	_ significantly distu	urbed? NO	Are "Norma	l Circumstances" p	resent? Yes 🗸	No
Are Vegetation, Soil _	, or H	ydrology	_ naturally problen	natic? No	If needed, e	explain any answe	rs in Remarks.)	
SUMMARY OF FINDIN								atures, etc.
Hydrophytic Vegetation Pres Hydric Soil Present? Wetland Hydrology Present? Remarks:		Yes / Yes / Yes/	No No No	Is the Sam within a W	-	Yes	No	
HYDROLOGY								
Wetland Hydrology Indicat						Secondary Indica	tors (minimum of t	wo required)
Primary Indicators (minimum	of one is re	equired; check	all that apply)			Surface Soil	• •	
Surface Water (A1)			itic Fauna (B13)				etated Concave S	iurface (B8)
High Water Table (A2)			Deposits (B15) (LF	•		Drainage Pat		
Saturation (A3)			ogen Sulfide Odor			Moss Trim Li	•	,
Water Marks (B1)			zed Rhizospheres		oots (C3)		Water Table (C2)	ł
Sediment Deposits (B2) Drift Deposits (B3)			ence of Reduced In	· ·	00)	Crayfish Burr	• •	
Algal Mat or Crust (B4)			nt Iron Reduction i		C6)		sible on Aerial Ima	igery (C9)
Iron Deposits (B5)			Muck Surface (C7) r (Explain in Rema			Geomorphic Shallow Aqui		
Inundation Visible on Ae	arial Imagen		(Explain in terna	1101		FAC-Neutral	* *	
Water-Stained Leaves (		()					ioss (D8) (LRR T,	ın l
Field Observations:				1				<del></del>
Surface Water Present?	Yes	No	Depth (inches):					
Water Table Present?			Depth (inches):	1				
Saturation Present? (includes capillary fringe)	Yes	No I	Depth (inches):		Wetland H	lydrology Presen	t? Yes	No
Describe Recorded Data (str	eam gauge	monitoring we	il, aerial photos, pr	revious inspec	ions), if ava	ilable:		
Remarks:								

/EGETATION (Five Strata) – Use scientific nar	-			Sampling Point: DS9
Tree Stratum (Plot size: 30'  1. Liviodendron tulipifera	% Cover	Dominant Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
	10	7	FAC	Total Number of Dominant Species Across All Strata: (B)
4 5 6.				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
50% of total cover: 45		= Total Co		Prevalence Index worksheet:  Total % Cover of: Multiply by:
	20% 01	toral cover	·	OBL species x 1 =
Sapling Stratum (Plot size: 30'		<b>\</b> 1	ر. ب <del>ت</del>	FACW species x 2 =
1. Acer rubrum	15_	7	HAC	FAC species x 3 =
2. Liquidambar Styroniflua	15	7	FAC	1
3. 0				FACU species x 4 =
4.				UPL species x 5 =
5.				Column Totals: (A) (B)
6			•	Prevalence Index = B/A =
1 =		= Total Co		Hydrophytic Vegetation Indicators:
50% of total cover: <u>15</u>	20% of	total cover	_مـ	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30' )				2 - Dominance Test is >50%
1			<del></del>	3 - Prevalence Index is ≤3.01
2				Problematic Hydrophytic Vegetation¹ (Explain)
3				<del>-</del>
4 5				¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6				Definitions of Five Vegetation Strata:
	0	= Total Co	ver	
50% of total cover: O				Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
1. Chosmanthium laxum		7	FRU	Sapling - Woody plants, excluding woody vines,
2. Lonicera japonica 3. Woodwardia areolata	<u> 10</u> 5	<u> </u>	BACILI DBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
4. <u>Osmundastrum Cinnamomeun</u> 5	•	_~	FACU	Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6	· ——			Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately
8				3 ft (1 m) in height.
9				Woody vine - All woody vines, regardless of height.
11.				
50% of total cover:		= Total Co		
Woody Vine Stratum (Plot size: 30' )	<u>~</u> 20% 0	I (CABI COVE	. <u>1.0.</u>	
1				
2.				
3.				1
				t

= Total Cover 20% of total cover:

50% of total cover:

Remarks: (If observed, list morphological adaptations below).

Hydrophytic Vegetation Present?

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth Matrix		Redox Feature					
(inches) Color (moist)	<u>%</u> Color	(moist) %	Type <sup>1</sup> Loc <sup>2</sup>	<u>Texture</u> <u>Remarks</u>			
0-12 104R311	<u> 100</u>			<u>Sandy Isam</u>			
W-24 104R5/1	95 10YR	514 5		sandy clay loom			
				3-3			
	<del></del>						
			· ——				
¹Type: C=Concentration, D=Dep	Nation PMcPadusa	d Mairiy MCaMacka	d Send Greine	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applic				Indicators for Problematic Hydric Solls <sup>3</sup> :			
Histosol (A1)			ice (S8) (LRR S, T, U				
Histic Epipedon (A2)		hin Dark Surface (SS		2 cm Muck (A10) (LRR S)			
Black Histic (A3)		oamy Mucky Mineral		Reduced Vertic (F18) (outside MLRA 150A,E			
Hydrogen Sulfide (A4)		oamy Gleyed Matrix		Piedmont Floodplain Soils (F19) (LRR P, S, T			
Stratified Layers (A5)	—/	epleted Matrix (F3)	·· -/	Anomalous Bright Loamy Soils (F20)			
Organic Bodies (A6) (LRR F	_	edox Dark Surface (	F6)	(MLRA 153B)			
5 cm Mucky Mineral (A7) (LI		epleted Dark Surfac		Red Parent Material (TF2)			
Muck Presence (A8) (LRR L	J) R	edox Depressions (f	<sup>5</sup> 8)	Very Shallow Dark Surface (TF12)			
1 cm Muck (A9) (LRR P, T)	N	lari (F10) (LRR U)		Other (Explain in Remarks)			
Depleted Below Dark Surface	e (A11) D	epleted Ochric (F11)	(MLRA 151)	_			
Thick Dark Surface (A12)			ses (F12) (LRR O, P,	· · · · · · · · · · · · · · · · · · ·			
Coast Prairie Redox (A16) (I		mbric Surface (F13)		wetland hydrology must be present,			
Sandy Mucky Mineral (S1) (		elta Ochric (F17) (M	•	unless disturbed or problematic.			
Sandy Gleyed Matrix (S4)			(MLRA 150A, 150B)				
Sandy Redox (S5)		•	Soils (F19) (MLRA 14:	•			
Stripped Matrix (S6) Dark Surface (S7) (LRR P, 3	_	mornalous Bright Los	imy Soils (F20) (milka	A 149A, 153C, 153D)			
Restrictive Layer (if observed)				T T T T T T T T T T T T T T T T T T T			
	•						
Type:				Hudda Sall Brassett Was 1			
Depth (inches):				Hydric Soil Present? Yes V No No			
Remarks:							
•							
1							
1							
1							

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Centervill	e-Fore	n Field	Area ci	ty/County:C	hesa pe	nke	Sampling I	Date: 05/10/10	
Applicant/Owner: Tri-Cit	ties Pro	nertics	.LC		,	State: VA	Sampling F	Point: DS ID	
Investigator(s): Both		,	,	ection, Township					
Landform (hillslope, terrace, et	(a) / 10/	and Fl					<u> </u>	Slope (%): 0-2	
Subregion (LRR or MLRA):	I DOT	<u> </u>	21.01			76°10'0			
Subregion (LRR or MLRA):			Lat: <u>\( \( \( \) \( \) \( \)</u>	+4 7d	Long: _			_ Datum:	
Soil Map Unit Name:		<del></del>				NWI classific		<u>1</u>	
Are climatic / hydrologic condit	tions on the	site typical fo	or this time of year?	? Yes 🔽	No	(If no, explain in F	lemarks.)		
Are Vegetation, Soil	, or Hy	drology	significantly dis	sturbed? NO	Are "Norma	al Circumstances"	oresent? Ye	∌s <u> </u>	
Are Vegetation, Soil _	, or Hy	drology	naturally proble	ematic? No	(If needed,	explain any answe	rs in Remar	ks.)	
SUMMARY OF FINDING	GS – Atta	ach site m	ap showing s	ampling poi	nt locati	ons, transects	, importa	nt features, etc.	
Hydrophytic Vegetation Pres	ent?	Yes 🗸	. No						
Hydric Soil Present?	Cutt	Yes		Is the Sam	pled Area				
Wetland Hydrology Present?	J	Yes	No V	within a W	etland?	Yes	No _	<u>~</u>	
Remarks:									
HYDROLOGY					<u>.</u>				
Wetland Hydrology Indicate						Casadon India			
Primary Indicators (minimum		anired: check	k all that anniv)			Secondary Indicators (minimum of two required)			
Surface Water (A1)	Of Others re		uatic Fauna (B13)			Surface Soil Cracks (B6)			
High Water Table (A2)				I DD 111		Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10)			
				Moss Trim Lines (B16)					
Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Oxidized Rhizospheres along Living Roots (C3)					Dry-Season Water Table (C2)				
Sediment Deposits (B2)			sence of Reduced			Crayfish Burrows (C8)			
Drift Deposits (B3)			cent Iron Reduction	• •	(C6)	Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4) Thin Muck Surface (C7)				Geomorphic Position (D2)					
Iron Deposits (B5) Other (Explain in Remarks)				Shallow Aquitard (D3)					
Inundation Visible on Aerial Imagery (B7)						FAC-Neutral	Test (D5)	Į.	
Water-Stained Leaves (E	39)					Sphagnum r	noss (D8) (L	RR T, U)	
Field Observations:									
Surface Water Present?			Depth (inches): _						
Water Table Present?			Depth (inches): _						
Saturation Present? (includes capillary fringe)			Depth (inches): _			Hydrology Presei	nt? Yes _	No	
Describe Recorded Data (stre	eam gauge,	monitoring v	vell, aerial photos,	previous inspec	tions), if av	ailable:			
Remarks:									
								}	
:									
								1	
								İ	
								<b>I</b>	

/EGETATION (Five Strata) - Use scientific na				Sampling Point: D.S.	slo
Tree Stratum (Plot size: 30'		Dominant Species?		Dominance Test worksheet:	
1. Pinus toeda	40			Number of Dominant Species That Are OBL, FACW, or FAC:	(A)
2. Liniodendron tulipitera	<u> </u>	4	ACU	THAT WE OBL, FACW, & FAC.	(/-)
3. Liquidambar Styraciflua		7	FAC	Total Number of Dominant	
S. HIGHERTON STATEMENT				Species Across All Strata:	(B)
5				Percent of Dominant Species	
5 6				That Are OBL, FACW, or FAC: (2.5	(A/B)
<u> </u>	<b>A</b> 5	= Total Co		Prevalence Index worksheet:	
50% of total cover: 4				Total % Cover of: Multiply by:	
Sapling Stratum (Plot size: 30' )				OBL species x 1 =	_
Sapling Stratum (Plot size: 30')  1. Acer rubrum 2. Liguidambar, Stymnifluce	15	F.	Far	FACW species x 2 =	_
Liquidambar Stymniflua	15	7	FAC	FAC species x 3 =	_
3		—	1415-	FACU species x 4 =	_
·	<del></del>			UPL species x 5 =	_
				Column Totals: (A)	_ (B)
	-30	= Total Co		Prevalence index = B/A =	
50% of total cover:			,	Hydrophytic Vegetation Indicators:	
Shrub Stratum (Plot size: 30'	20% 01	total cover	·	1 - Rapid Test for Hydrophytic Vegetation	
Liquidambar Styraciflua	. 3	٧.	EM.	2 - Dominance Test is >50%	
- Lightmannia Syracifica			170	3 - Prevalence Index is ≤3.01	
<u>.                                    </u>				Problematic Hydrophytic Vegetation¹ (Expla	in)
				Indicators of hydric soil and wetland hydrotogy	must
				be present, unless disturbed or problematic.	
	3			Definitions of Five Vegetation Strata:	
		= Total Co		Tree - Woody plants, excluding woody vines,	
50% of total cover: 1.	<u> </u>	total cover	:_ <u></u>	approximately 20 ft (6 m) or more in height and 3 (7.6 cm) or larger in diameter at breast height (D	
Herb Stratum (Plot size: 30')	E- 10	7		(7.5 GH) Grianger in diameter at breast height (D	/вп).
Parthenocissus guinquefor			EXU	Sapling - Woody plants, excluding woody vines	
Texicodendron radicions		<u>~√</u>	<b>EAC</b>	approximately 20 ft (6 m) or more in height and I than 3 in. (7.6 cm) DBH.	ess
Vitis rotunditolia		7	DAC.		
t				Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.	
·			<del></del>	approximately 5 to 20 it (1 to 6 iii) in height.	
. <u></u>				Herb - All herbaceous (non-woody) plants, inclu	
7.				herbaceous vines, regardless of size, and wood plants, except woody vines, less than approxima	
3				3 ft (1 m) in height.	icoly
)				Woody vine - All woody vines, regardless of he	i-h.
0				woody vine - All woody vines, regardless of ne	agnt.
l1					
	<u>14</u>	= Total Co	ver		
50% of total cover:	<u>7_</u> 20% of	total cover	2.8		
Woody Vine Stratum (Plot size: 30'					
. Lonicera japonica	5	<u></u>	FACU		
Witis rotundifolia	_2	7	FAC.		
. Toxicodendron radicans		N	FAC		
ł					
5				Hydranbutta	
	. 8	= Total Co	 ver	Hydrophytic Vegetation	
50% of total cover: 4		total cover		Present? Yes No	

2 = Total Cover 20% of total cover: 1.Le

50% of total cover:

Remarks: (If observed, list morphological adaptations below).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth Matrix Redox Features								
(inches) Color (moist) % Color (moist) % Type Loc 2	Texture Remarks							
0-12 104R311 100	sandy loam							
12-24 10YR 5/1 95 10YR 5/4 5								
14-44 101K 3/1 45 101K 3/1 0	sandy clay loam							
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.							
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Solis <sup>3</sup> :							
Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, L								
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)							
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)							
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)							
Stratified Layers (A5)  Crganic Bodies (A6) (LRR P, T, U)  Depleted Matrix (F3)  Redox Dark Surface (F6)	Anomalous Bright Loamy Soils (F20)							
<u> </u>	(MLRA 153B)							
5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7)	Red Parent Material (TF2)							
Muck Presence (A8) (LRR U) Redox Depressions (F8) 1 cm Muck (A9) (LRR P, T) Mart (F10) (LRR U)	Very Shallow Dark Surface (TF12)							
1	Other (Explain in Remarks)							
Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P,	T) <sup>3</sup> Indicators of hydrophytic vegetation and							
Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U)	wetland hydrology must be present.							
Sandy Mucky Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 151)	unless disturbed or problematic.							
Sandy Gleyed Matrix (S4)  Reduced Vertic (F18) (MLRA 150A, 150B)								
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 14								
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLR								
Dark Surface (S7) (LRR P, S, T, U)								
Restrictive Layer (if observed):								
Type:								
Depth (inches):	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							
	Hydric Soil Present? Yes No							
Remarks:								
1								